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Academic Library Salaries in a Seven-State Area

To learn more about their educational backgrounds and salaries, the writer undertook a survey of academic librarians in the seven upper plains states of South Dakota, North Dakota, Minnesota, Iowa, Nebraska, Wyoming, and Montana. Results indicate that many administrators hire individuals with preparation below the Masters level yet call them librarians. At the same time those who have two Masters degrees tend to begin at the same or nearly the same salary as those with only the Masters in Library Science. The paper raises questions about the implications of such practices.

In our affluent society the financial status of librarians is far from encouraging and, at present, there seems to be little basis for optimism about the immediate future. One indication of this dim prospect is that little information is available about existing conditions.

The statistics on college and university libraries compiled by the U.S. Office of Education are helpful, but more detail is needed. Because of disagreement within the profession about the educational requirements necessary for professional service and because some institutions seem to hire persons with low qualifications in hope that they can create instant librarians by the laying on of a title, the profession needs to determine the requisite educational attainments of academic librarians on the operational level. This should include statistics on how many individuals are called "professional" without possessing the Masters degree and also how many have earned degrees in addition to the Masters in library science. Finally, if the second Masters is as important as some librarians feel it is, how much are colleges willing to pay for it? And, a related matter, how do librarians' salaries compare with those of faculty members with similar background and experience?

To learn more about prevailing practices with regard to some of the questions raised above, the writer undertook a survey of academic libraries in South Dakota, North Dakota, Minnesota, Iowa, Nebraska, Wyoming, and Montana. The choice of states was based, simply, on geography. Questionnaires were sent to ninety-six libraries in February 1968—sixty-eight replied. Of these, twenty-six were public, thirty-seven were private, three did not identify themselves as to type of control, and two more returned the questionnaire without supplying the information sought. The statistics reported in this paper, then, are based on sixty-six replies from the seven states.

Basic to the question of salary and the matter of academic status is the educational qualification expected of professionals. Approximately 12 per cent of all academic librarians in the seven-state area do not have a Masters degree, yet

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Mr. Massman is Director of Libraries in the University of South Dakota.
they are called librarians.¹ When the four largest institutions are excluded (the universities of Iowa, Iowa State, Minnesota, and Nebraska—all of which appear to demand the Masters as an essential before the individual may be labeled a librarian), the percentage jumps to more than 25 per cent. This means that more than one of every four librarians in the responding institutions (the big four excepted) has the name without the usual education—if indeed the Masters degree is the basic requirement for entrance into the profession. Looking at the results in another way, twenty-nine of the sixty-six responding libraries, or nearly 44 per cent, employ individuals without the degree but call them librarians. This practice prevails in almost all types of academic libraries, both public and private, from the smallest to some of those which serve 6,000 to 7,000 students. The four largest libraries are the only exclusion.²

One might raise the question of whether current practice in some institutions has implications as far as the status of librarians is concerned. If the PhD is the accepted level of preparation for the faculty, how do they react to the profession of librarianship which accepts people as being fully qualified with only the Bachelors degree? Someone who has an undergraduate degree and no library science, or perhaps fifteen or twenty undergraduate credits in this area, can hardly be held up as an example of erudition to a faculty member who may well have had as many credits in one subfield of his own discipline.

Nearly 35 per cent of the respondents reported that they were sometimes forced to hire individuals who did not meet their expectations—although one librarian replied that he would be happy to be forced to hire anyone, whether qualified or not. The question obviously arises, is hiring someone just for the sake of filling a position a boon either to the profession or to that library? Chairmen of academic departments have been known to hire men without appropriate qualifications as temporary expediencies for the sake of getting someone who can walk into the classroom on the first day of the new term. More energetic, aggressive, and successful chairmen let it be known, however, that they are only “making do,” and insist that they need more money to get better men next year. Most institutions, of course, deny tenure to anyone who does not have the PhD. This puts additional pressure on the administration to provide more money.

Librarians have dealt in the currency of dedication to service for a long time, and some will feel that it is time to begin dealing in hard cash. A large portion of the problem, of course, is that if the librarian gets a small sum of money and hires whomever he can get, calling that person a librarian, why should the central administration provide more money next time? The library found someone it called a librarian for $5,000 last year. Why should a librarian cost $9,000 or $10,000 this year? Some library administrators have been effective in this area, but until more of them change their tactics it is likely that average salaries for librarians will remain low. The professional associations also have a mission in this area. Getting salaries up to a competitive level might go far toward solving the shortage of librarians.

Some library administrators are obviously “making do” with what they can get rather than demanding what they¹ The older fifth year BS in LS is considered, for the purposes of this paper, the equivalent of the Masters.
² The questionnaire needs refinement at this point. No doubt a few individuals who are listed as librarians have a specialty in a related area such as computer science or in another discipline. Nevertheless, the conclusion that many individuals in academic institutions are called librarians even though they do not have any appropriate Masters degree is, in general, an accurate assessment of existing conditions.
need. Do department chairmen in chemistry or history or music hire teachers with degrees in biology or English or theater? Some can rightly claim that a subject degree in another discipline is valid preparation for some kinds of librarianship, but library science itself is also a discipline worthy of study. If there are inadequacies in the curriculum, as some claim, the only solution is to work to improve it. In general, however, library science courses at most graduate schools probably compare favorably with Masters level courses in other disciplines.

This, however, leads to another question. If subject knowledge is important, how well do academic libraries pay for it? Nearly 15 per cent of all librarians in the survey have at least two Masters degrees. This is larger than the percentage of those who do not have the Masters in library science. The individuals with two Masters degrees are employed in thirty-one of the sixty-six reporting libraries, or nearly 47 per cent, yet fewer than one in every four libraries (sixteen of the sixty-six, or 24.2 per cent) say that they will automatically pay for the extra academic preparation—even though some professionals seem to consider the second Masters more significant than the PhD in library science. Of those which give extra compensation the usual range is $200 to $500 with the weighting on the lower end of that scale. Only one institution approaches a realistic figure—up to $1,000.3

If librarians consider the second Masters degree significant, they should doubtless work harder toward the development of salary increments attractive enough to encourage people to invest the necessary time and energy to earn the extra degrees. How much does it cost to attend a university to earn a second Masters? Estimates will vary depending on the institution and the degree, but an automatic increment of at least $1,000 per year would seem to be an absolute minimum as an inducement to encourage further education, and this should be built into the schedule. Until encouragement is given through the pay check, other arguments for it sound hollow. With librarians as with faculty members or automobiles, the extras cost money, and the sooner the profession recognizes this the better. At present the individual in the library profession with the extras is more often than not treated like the standard model.

To become more specific about the matter of money, more than half (thirty-four of sixty-six respondents, or 51.5 per cent) of the institutions reported that salaries for librarians were equal to those of faculty members with equivalent background and experience; yet when librarians' salaries are compared with American Association of University Professors (AAUP) reports, the case appears to be somewhat different.

Evidently some librarians are not familiar with faculty salaries at their institutions. An illustration will demonstrate this point. Twelve respondents from public colleges and universities identified themselves and reported equal salaries for librarians and faculty members. Instructors at three of the institutions fell into the AAUP's "B" compensation scale for the 1967-68 term which shows a minimum salary of $6,100 and an average of $7,300 for nine months.4

3 Especially in the larger institutions, the person with the second Masters may be brought in at the beginning salary, but the additional degree will make it possible for him to advance more quickly. Consequently, over a period of time the additional education may result in a higher salary.

4 "On the Financial Prospects for Higher Education: the Annual Report on the Economic Status of the Profession, 1967-68," AAUP Bulletin, LIV (June 1968), 197, 208-36. All subsequent references to the AAUP report on salaries will be found on these pages. The AAUP's averages for total compensation have been adjusted when applied to librarians, and only the salaries of beginning librarians were used for purposes of comparison.
At two of these three institutions, beginning librarians are near the average scale; at the third institution, however, the salary of beginning librarians is well below that of the minimum level for instructors at the same institution.

Instructors at seven of the twelve institutions mentioned above fall into the AAUP's "A" compensation scale which shows a minimum rate of $6,600 and an average of $7,930. At four of these seven the salary of beginning librarians meets the minimum level for instructors, but at only one institution does it approach the average. Again, at three institutions the salary for beginning librarians falls well below the minimum beginning salary for instructors at class "A" institutions, and at one of these it even falls below the minimum for class "B" institutions.

What can one conclude from this? Assuming that the writer has made no gross errors in interpretation, one can only suggest that librarians do not receive equal pay for equal preparation; and, further, that some head librarians do not know what faculty members earn. In those institutions in which librarians are on the same salary scale as their teaching colleagues, the librarians definitely tend to be at the bottom of the scale—if not below ground level. In many cases the librarian works for twelve months for approximately the same sum as instructors earn in nine months.

If librarians are to compete for talent in the open market, comparisons must also be made on a broader scale. Few librarians have a background in the sciences, and it is not hard to see why. In 1967-68 the average beginning salaries for men with the Bachelors degree in chemistry, mathematics, or physics was $766 per month, or $9,192 per year. For men with the Masters degree in these disciplines, but without experience, the average beginning salary was more than $100 per month higher than that for candidates with the Bachelors. This amounts to an "automatic" increase of more than $1,200 for the additional education. Of even greater significance, however, is the fact that the average beginning salary for men with the Bachelors degree in nontechnical fields (the humanities, social sciences, and business) was $693 per month, or $8,316 per annum.5

How does this compare with librarians? In those public institutions which reported that librarians' salaries were equal to faculty salaries with similar backgrounds, the average for beginning librarians without experience was $7,933 for twelve months. In the remaining public institutions salaries averaged $7,234. For private colleges which reported librarians' salaries equal to faculty members', the average beginning librarian's salary was $6,784; those which reported unequal salaries averaged only slightly lower at $6,735, a difference of but $49. The average beginning salary for librarians in all institutions combined was $7,159, which is $146 below the $7,305 salary reported in 1967 for beginning librarians throughout the country.6 If, however, only the public institutions are considered, the average is $7,618, which is somewhat higher than the national average.

Far more significant than the average, however, is the salary range for beginning librarians. For private institutions the range in 1967-68 was a low of $5,000 and a high of $9,333. The reporter at the low end of the scale stated that this was for a candidate with the Bachelors degree although the individual appears to have been hired as a fully qualified librarian. For public institutions the range was $6,000 to $10,133. In both cases salaries were computed on a twelve-month basis.

Academic Library Salaries in a Seven-State Area / 481

**Salary Survey**

Name of institution (optional) .............................................

If you do not wish to identify your institution, please indicate the type of school. Private .... State .... College .......... University ....

1) Number of librarians with a Masters degree in Library Science ....

2) Number of librarians with the older BS in Library Science rather than the Masters ....

3) Number of librarians you consider professionals who do not have a degree in Library Science ....

4) Number of librarians with a second Masters degree ....

5) Number of librarians with work beyond the Masters degree ....

6) Number of librarians with the Ph.D. degree in Library Science ....

7) Number of librarians with the Ed.D. or Ph.D. degree in other subject areas ....

8) Do you have a salary schedule giving regular annual increments? .... If so, what is the usual annual increment? ....

9) Do you use a merit system in determining salary increases? .... If so, what was last year's range of increases? .... to ....

10) Salary of beginning librarians without experience ....

11) How much of an increment do you give to candidates without experience if they have special qualifications, outstanding academic records, or superior recommendations? ....

12) Do you automatically make special adjustments for additional education such as a second Masters degree? .... If so, how much for a second Masters degree? ....

13) When you add a new staff position, do you ordinarily get a specific sum of money or do you get a salary range so you can negotiate with applicants? A specific sum? .... A salary range? .... If you get a salary range, what is the usual range for beginning positions? .... For administrative heads?

14) Are salaries for librarians equal to salaries of faculty members with similar educational background and experience? Yes .... No .... If not, approximately how much higher or lower are salaries of librarians?

15) Are you sometimes forced to hire librarians who fail to meet your expectations because you are unable to find qualified candidates? Yes .... No .... If yes, why are you unable to attract qualified candidates? ....

16) Additional comments.

<table>
<thead>
<tr>
<th>No. of Positions</th>
<th>9 months</th>
<th>Highest Salary</th>
<th>Lowest Salary</th>
<th>Average Salary</th>
</tr>
</thead>
<tbody>
<tr>
<td>Chief Librarian</td>
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<tr>
<td>Associate or Assistant Librarian</td>
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<tr>
<td>Branch Librarians</td>
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<tr>
<td>Department Heads</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>All other Librarians</td>
<td></td>
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</table>
CONCLUSION

Because no terms were defined and because no instructions accompanied the questionnaire, the respondents had to interpret each item on the basis of personal experience and local conditions. It is for this reason, too, that many of the items on the questionnaire will not be discussed in this paper. One respondent, for example, gave a minimum beginning salary of $6,500 but then reported an average salary of $4,300 for all other librarians (i.e., librarians other than the director, assistant directors, branch librarians, and department heads). A more detailed and more carefully administered questionnaire seeking information along the lines of this study could produce more accurate information which should be of considerable value to library administrators.

In spite of the shortcomings of the questionnaire, however, it appears that considerable inequities exist between salaries of librarians and those of faculty members with similar qualifications and experience. The only reason for optimism about the future is the fact that at least two institutions offer $10,000 or more per annum to beginning librarians. The writer is convinced that the current practice in various institutions of hiring anyone who can be pressed into service or who is willing to accept a job at a low salary is a disservice, over the long run, both to the institution and to the profession. Such action does not put pressure on the administration to provide additional funds nor does it enhance the status of the profession. These facts prompt one to ask if it would not be appropriate for professional associations to establish minimum qualifications for admission to the ranks of librarians and also officially to encourage education beyond the minimum professional level? It might also be appropriate to ask if the professional associations should develop salary objectives such as those of the AAUP?

**TABLE 1**

<table>
<thead>
<tr>
<th>Salaries of Beginning Librarians</th>
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<tr>
<td></td>
</tr>
<tr>
<td>Average</td>
</tr>
<tr>
<td>Low salaries</td>
</tr>
<tr>
<td>High salaries</td>
</tr>
</tbody>
</table>

All salaries are computed on a twelve-month basis.

**TABLE 2**

<table>
<thead>
<tr>
<th>Education of Librarians</th>
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</thead>
<tbody>
<tr>
<td>Per Cent of Librarians</td>
</tr>
<tr>
<td>Without Masters in library science</td>
</tr>
<tr>
<td>With second Masters degree</td>
</tr>
<tr>
<td>With work beyond the Masters in library science</td>
</tr>
<tr>
<td>With the Ph.D. or Ed.D. degree</td>
</tr>
</tbody>
</table>

* The four largest institutions (the universities of Iowa, Iowa State, Minnesota and Nebraska) are excluded from this percentage but are included in all others.
As curricula change on the undergraduate campus the college library faces problems in meeting the changed information demands being made upon it. To understand these problems better a research project funded by the National Science Foundation was begun in 1967 at Hamline University. The study concluded that the undergraduate library must become more of an information switching center, which both identifies and meets the information needs of its clientele. A pilot switching center is now being developed at Hamline University, again funded by the National Science Foundation, to develop techniques for effectively meeting campus information needs.

From 1964 to 1966 the library staff of Hamline University accumulated considerable evidence that its campus library was not meeting the needs of its institution's educational program. There were several environmental changes which seemed to have been contributors to inadequacies of the library.

The college library was expected to provide more periodical and book titles than ever before. But even the provision of a meaningful collection of core materials has become economically more difficult because of the wider range of published materials from which to select. Changes in the faculty are likely to require a completely different collection of library materials to support new courses. Faculty members both new and old place greater reliance on periodical articles, which has required the strengthening of periodical collections, including publications available in reprint and microform editions.

Materials required for college subjects also increased in both depth and breadth. A gradually changing curriculum was placing more emphasis on library research in some subject areas. The development of individualized study programs, under the general label of "independent study," meant that the students were in need of materials previously considered beyond the scope of the college library. For example, college libraries have seldom included source material in their collections for history students, relying instead on interpretative monographs. With the advent of independent study programs some history students found themselves in need of a variety of source materials which the campus library was ill-equipped to provide.

The library staff also became aware of the inadequacies of the bibliographic control systems which they provided. The card catalog, based on Library of
Congress cataloging, was not without its shortcomings. Subject headings were outdated and frequently too general to be of significant use to students. Also, too many periodical indexes were issued too slowly to meet the needs of many students. Finally, there was no satisfactory method of locating materials which might be used by students in the metropolitan area of the Twin Cities of Minneapolis and St. Paul, an area which includes seven college libraries, a university library system of over two million volumes and many nonacademic libraries.

Serious as these problems were, the library staff found itself hampered in defining basic problems and exploring solutions, because of the time requirements of daily operations. In an effort to find a way of defining basic problems the authors submitted a proposal to the National Science Foundation.

In the grant proposal the problems were summarized thus:

The small, liberal arts college library is becoming less and less adequate to fulfill the complex and expanding requirements of its user groups. New information sources and services increase the scope and variety of the information environments in which the small, liberal arts college is embedded. New directions and more sophisticated solutions are required if the small, liberal arts college is to keep pace with the information explosion.¹

The study was to be accomplished as five interrelated tasks:

1. describe present state of the critical variables;
2. project future characteristics of users and external services;
3. define requirements, constraints, and criteria for future system;
4. generate potential solution concepts for Hamline information system;
5. evaluate potential solution concepts.

Methodology

The contract researchers, working under the direction of the principal investigators, developed a methodology which they believed would accomplish the five tasks. Their procedures and techniques were divided into three broad areas:

1. a classification of major sources of study data;
2. an identification of alternative techniques for obtaining data from various sources;
3. a description of some probable procedures that would be used to process the obtained study data.

Two sources of data were tapped: personnel sources and written sources. Three personnel sources of data were identified: (1) "Those individuals who are identified as users of the defined information system; (2) those individuals who are knowledgeable regarding sources of information within the selected study scope; (3) those individuals who are knowledgeable regarding procedures for obtaining system information."² Five classes of written sources of information were identified: (1) documents describing Hamline University information sources, content, and procedures for retrieving information; (2) reports concerning studies done on the adequacy of the current information system; (3) planning papers of various faculty committees describing mid- and long-range plans for Hamline University; (4) documents describing ongoing or planned projects and programs in


² Ibid., p. 7.
local area which contribute to the current information system; (5) materials describing the capabilities, facilities, and experiences of local companies, colleges, and contractors in the broad area of technical and scientific knowledge and information.

The contract researchers decided to rely on interviews as the basic technique for obtaining data. Three interview techniques were used to varying degrees during the research program:

1. Unstructured interview. The researchers characterized this as "generally 'open ended' and the interviewee is not restricted to any particular set of responses."

2. Critical incident interview. "The interviewee would be asked to select a situation in obtaining needed information."

3. Structured interview. "The interviewee responses are usually restricted to ranking or rating a prepared list of factors found to be significant with respect to performance of the user."

In order to process the data obtained during the study the researchers decided to apply three "basic system-derived methods":

1. Descriptive model construction. The researchers anticipated a need to develop a number of descriptive models which would "portray key elements associated with each user-information-interface subsystem."

2. Projection of requirements. "... the objective will be to determine future information system needs, user roles, and interface requirements to meet these future projections."

3. Simulation studies. "Proposed solutions will have to be evaluated prior to being rejected or recommended. Simulation provides a useful system tool for examining alternative concepts for correcting either deficiencies in user knowledge, gaps in the information system, or inefficiencies in the user/system interface." 3

Summary of Results

The comparability of the study of any particular library to others of its class is very difficult to achieve in an objective way. General statistics collected by and for the library profession are neither detailed nor standardized enough to make such comparisons. However, the campus library of Hamline University by size of collection, staff, and provided services is probably very typical of its particular class. Any deviations from the norm probably occur in the following areas:

1. Better faculty-library relations than are to be found on most campuses. The professional staff has pursued a policy for the past two years of actively improving liaison with the faculty in an effort to integrate more closely the library with the educational program of the school.

2. A more sophisticated use of professional and clerical staff than is common in academic libraries.

3. Extremely crowded physical conditions which are not conducive to efficient processing operations nor attractive to the users.

4. A rate of growth which probably has lagged behind the rate of growth for the college generally. Growth here is broadly defined as improvement of programs and not simply as increased enrollment or acquisition rate, although these are factors.

5. An active concern of many of the faculty that the campus library is not adequate for the educational program of the school.

3 Ibid., p. 8.

4 Ibid., p. 9.
The research effort was directed primarily at attempting to determine whether there was any basis in fact for the opinion of the professional staff that the campus library was playing a less significant role in the educational program of the school than seemed desirable. The best approach to the problem was, naturally, a quantification of the role which the campus library played on campus. As a preliminary study, taking place within one year, the researchers were unable to quantify completely the factors which relate to the significance of a library operation. This inability was due to the fact that very little work has been done by the profession in the past to establish reliable, statistical indicators for such factors, and the amount of time necessary to establish them was not available.

Evidence was gathered, however, which indicated interesting results in three different areas. The evidence indicated that on the Hamline campus the more sophisticated the library user, the less his dependence on the campus library. This result seems to corroborate the studies of scientist users. The study also indicated that the communication channels between the campus librarians and the faculty were inadequate. Finally, there is a need for more effective and timely control of information at the undergraduate level of education.

The contract researchers conducted an interviewing program which included 60 per cent of the faculty, sixteen honors and independent study students, and eighteen "regular" students who had never registered for honors or independent study projects. The sampling of the faculty was statistically significant, while the sampling of students was not statistically significant. The majority of students were selected on the basis of their being heavy library users.

The six top sources of information used and the percentage of faculty using each were: professional meetings, 60 per cent; University of Minnesota library (the main library is three miles distant from the Hamline campus), 50 per cent; campus departmental libraries, 27 per cent; Hill Reference Library (a non-circulating reference library in St. Paul, three miles distant from the Hamline campus), 21 per cent; campus main library, 19 per cent; colleague's collections, 15 per cent.

It is not surprising that the campus library does not play a greater role in providing faculty information, since the traditional policy of college libraries has been to provide only support to the undergraduate program. It is interesting, however, to note that a library is not the most common channel for obtaining information among the faculty, and it is also interesting to note the use of their colleague's collection as sources of information. These results seem to agree generally with those reported by other researchers. Donald P. Hammer, in "National Information Issues and Trends," reported on "the indifference of scientists and technologists toward the use of information centers and libraries. This lack of use compounds the national information problem in that scientists are not only flooded with data that lacks good bibliographic control, but they apparently do not use the existing facilities that can provide some relief."5

Among the students a considerable difference was noted in the way in which the honors and independent study students sought information, and the way in which "regular" students on campus met their information needs. The honors-independent study students, faced with an in-depth research project which required considerable library use, seemed to find the campus library of less help than might be expected. Following, in ranked order, are the most

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commonly used collections among honors-independent study students: main library, 56 per cent; Hill Reference Library, 44 per cent; professor’s personal collection, 38 per cent; University of Minnesota library, 38 per cent; St. Paul Public Library, 31 per cent. Yet libraries as sources of information did seem to be of more importance to such students than to their professors. It is also interesting to note that their professors’ collections ranked at the same level as the University of Minnesota library.

The “regular” students fit a pattern of usage that one could anticipate. But even so, the students used a variety of collections: main library, 72 per cent; St. Paul Public Library, 61 per cent; professor’s personal collection, 39 per cent; Minneapolis Public Library, 39 per cent; campus department libraries, 33 per cent; Hill Reference Library, 33 per cent. While the student sample is small, it does suggest that the “regular” students probably were looking for assigned readings and secondary material to support assigned term papers. While the St. Paul and Minneapolis Public Libraries are good examples of their type, their collections cannot support research in many subject areas.  

The data collected also indicated another interesting phenomenon. Although the professional staff of the campus library has pursued a policy of establishing close communications with the faculty, the program still has much to accomplish. This program has consisted not only of informal contacts such as various social occasions, coffee breaks, working lunches, and committee assignments, but also a program of formal communication. For the last two years the librarians have scheduled meetings with each full-time faculty member to discuss any library problems he may have. Such meetings usually occur in the faculty office. While this program is somewhat unusual in academic libraries, the data indicates that very basic communication improvements still need to be made with the faculty. As the Schumacher report states, “The faculty and students appear to be generally unaware of current library holdings and services and of how best to make use of these facilities and services.”

Two excerpts from the Schumacher report based on interviews indicated information problems. For the faculty the report stated:

All of the faculty interviewed found it necessary to use information sources external to Hamline University in order to satisfy their needs for materials and services. Overall, seventeen sources were mentioned. Many of these sources are in the Twin Cities; however, some are located in other areas of the country. The two most frequently used sources are professional meetings and the University of Minnesota Library. Several faculty members have built up sizable personal collections of books and journal subscriptions. In a sense these collections reduce the demand on the central collection by providing an additional source of informational materials for professors and students to draw upon. (Note: most faculty members indicated that they were willing to make materials in collections available to colleagues and selected students.) The maintenance, updating, and expansion of these collections, however, constitutes a substantial personal expense.

About the students the researchers said:

The students working on independent study projects use a much wider range of material selection aids than the regular students. The regular student who is working on a term paper relies primarily on the Hamline University Library card catalog.

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*A discussion with the staff of the St. Paul Public Library corroborated the indication that student users were looking for assigned readings.*


and the Readers’ Guide to identify and select relevant material, while the independent study student uses several additional sources including principally abstract journals, special bibliographies, and journal article citations.9

The interviews indicated that both students and faculty are having information problems, and that the campus library is not meeting the information needs of the more sophisticated library users, even among the students.

Conclusion

The researchers drew two interesting conclusions from their work. Of perhaps slightly less importance to the immediate development of the campus library, yet perhaps of the greatest long-range importance, was this statement in the Schumacher report.

It is apparent that if the librarian wants the faculty to make use of the range of available services, he and his staff must market them; just indicating that certain services are available is not a sufficient stimulus for getting the faculty to use the services. This is, in part, due to the low expectation of faculty concerning the adequacy with which bibliographic service could be accomplished by the library. In order to overcome this attitude, which may or may not be well-founded, it would be necessary for the library staff to demonstrate to the faculty that this is not the case; e.g., bibliographies relating to various subject fields could be compiled on a trial basis and presented to selected faculty for review and evaluation.10

Two of the points in this statement pinpoint problem areas for librarians. In adjusting to modern conditions it seems that one of the areas of which librarians have in part failed to keep abreast is public relations, user liaison, “marketing,” or whatever other term may be used. But basically some librarians have not related the function of the library to modern problems. As a result there seems often to be little or no relationship in the mind of the user between his information problems and the library.

At the same time, by their inability to relate publicly the campus library to modern problems, librarians find themselves with inadequate staffs and facilities to provide increased information service to their users. Yet this very service, according to the Schumacher report, is one way in which librarians could demonstrate their relevance to users. For librarians to follow this course would require that they convince their funders that they are really relevant to information problems. It would seem from this dilemma that librarians need to develop public relations programs which indicate the importance of libraries to information problems.

Of more immediate importance to college libraries were the suggestions of the researchers for the future of the campus library. The researchers rejected the traditional solution of campus libraries to the problem of providing adequate information service. For Hamline University:

One approach to expanding the informational base of the library is to substantially increase or build up the permanent collection; that is, make the library responsible for acquiring, processing, and storing all the materials that are currently required or might possibly be required in the future. This approach is rejected because it does not meet the following criteria:

1) Acquisitions and operating costs: the cost associated with the purchase of materials would require a far larger budget than appears to be probable in the near future.

2) Growth potential or adaptability to structural characteristics: the current and planned for library facilities do

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9 Ibid., p. II-7.
10 Ibid., p. III-12.
not provide enough storage space for all the materials that would have to be acquired.

3) Marketability or applicability of acquired materials to a wide range of information needs: the rate of turnover in the faculty and student body places additional purchasing requirements on the library. Over 40 percent of the faculty has been at Hamline for less than four years. As the composition of the faculty shifts, the requirements for information change. In order to provide needed information, the library will have to purchase large numbers of informational materials in highly specialized areas. When faculty members leave, the library may be faced with the problem of storing a substantial amount of material which is of little or no value to its other users.11

Basically the researchers concluded that it is not economically feasible for the campus library to provide ever-expanding collections of material to meet the campus information needs. Their proposal is to solve the problem by emphasizing the campus library as an information switching center. The campus library traditionally has performed this role in limited ways. The interlibrary loan program for college faculty is the best known of such programs. In the Minneapolis-St. Paul area the seven college libraries have also established a direct borrowing system for their undergraduates. The researchers propose, however, that the college library go further than this.

The library could expand its base of informational resources by operating as a clearinghouse or switching center for materials services. As a clearinghouse, the library obtains the needed materials and services from other libraries or information centers and disseminates these materials to the faculty and students. These materials could be of several types: some examples include specialized books or sections of books, photocopies of journal articles, technical reports, pamphlets, abstracting bulletins, tables of contents of selected journals and specialized bibliographies.

There are three major advantages associated with having the library function as a clearinghouse. First, it enables the library to have a large pool of informational materials available to it without having the processing storage requirements associated with acquiring information for the permanent collection. . . . Second, by dealing with information sources and services which are based on large, comprehensive collections of material, the library can make available information search services and current awareness services which it could not otherwise provide without significantly increasing its own information resources and acquiring the necessary personnel and equipment (e.g., most of the current awareness services are computer based). Third, since the needs for specialized and in-depth material can be satisfied through the clearinghouse, the book budget can be directed towards purchasing only those materials that are needed by undergraduate students in completing their course requirements; that is, the budget can be concentrated on developing a good "core" collection rather than also attempting to meet specialized requirements associated with independent study and research projects. Considering the library as an information clearinghouse represents a significant shift from traditional operations. The library rather than the user is made responsible for identifying sources of informational materials and services and for compiling bibliographies and conducting literature searches to meet stated requirements.12

In more traditional library language the switching center concept consists of three major elements. First, there is the traditional concept of a core collection, which would directly support the curriculum of the college. Hopefully such a core collection would be selected with increasing sophistication, so that there

11 Ibid., p. IV-2.
12 Ibid., pp. IV-3-4.
would be few unused items in the col-
lection. Such a collection would prob-
ably contain many items in multiple
copies and also be heavily weeded to
keep abreast of changing user needs for
such materials.

The second role of the campus library
would be to serve as a transmission
channel between the sources of infor-
mation and the students and faculty.
The information transmitted would be
unrestricted as to format and location.
The information could be purchased
outright, either as available publications
or reproduced copies, or borrowed from
cooperating institutions. If the material
is borrowed, it would seem advisable
that the arrangement be one which is
beneficial to both the borrowing and
lending institutions.

The third element would be the se-
lective dissemination of information to
faculty and students as seems appro-
priate. For the faculty the service
would consist of information which re-
lated to the courses they were teaching
and the research they were conducting.
For the students the service would be
organized around courses which re-
quired information support of consider-
able scope. Such a service would enable
the students to devote maximum time to
using information rather than obtaining
it.

The research project generally indi-
cated that the college library faces a
considerable problem in providing the
needed information on campus. It also
indicated that the traditional attack on
the problem, the building of large cam-
pus collections, is not an economically
feasible approach to the problem. Nor
does the trend in higher education in-
dicate a lessening of the information
problem. There does seem to be a trend
toward more individualized and inde-
pendent study, with the emphasis on
the student learning to pose problems
and find solutions in various subject dis-
ciplines, rather than amassing a basic
store of information which will provide
him with a lifelong “education.” If the
college library is to become a significant
factor in modern higher education as it
is now developing, the library must de-
velop an ability to relate the mass of in-
formation generated in modern society
to the information needs of faculty and
students.

Based on the results of this study a
pilot study is now being conducted on
the Hamline campus with funding from
the National Science Foundation. This
pilot study deals with course prepara-
tion and conduct by four faculty mem-
bers with the objective of establishing
methods for dealing with information
needs emanating therefrom. Such meth-
ods may permit the development of an
effective and economically feasible cam-
pus information system which will meet
the sophisticated information needs of
the faculty and the slightly less sophis-
ticated needs of the students.
Cooperation Among Small Academic Libraries

Signs point toward an increasing number of consortia among academic libraries. The knowledge explosion and the sources of support encourage it. A brief study of several regional, state, and local consortia of small college libraries reveals various patterns but many similarities. Enthusiasm for cooperation runs high, but there is a notable lack of evaluation of such efforts. Some are taking irreversible steps as far as their collections are concerned. Positive factors seem to outweigh the negative. Consortia are here to stay.

Brief Overview of Cooperation

In all likelihood no other aspect of the total library picture has received so much discussion and proportionately so little action as has the subject of cooperation. Certainly there have been some accomplishments, but "it seems characteristic of this aspect of librarianship that for every foot of progress in cooperation there appears a mile of words upon the pages of our library publication." More than thirty years ago the late Carleton B. Joeckel complained that the word "cooperation" was so badly overworked in library writing that he hesitated to use it. If that was the case in 1936, it must be worn to a frazzle now, for the subject recurs in library literature with almost clock-like regularity.

Is it because librarians are so unimaginative that they rely upon "cooperation" as a crutch? Has cooperation among libraries, as Ralph Munn indicates, become a sacred concept like motherhood and the flag? Or is it because cooperation has become "so intertwined with librarianship itself that judgments about cooperative endeavors often become judgments about fundamental principles of library service?"

One rather suspects that among the many revolutions occurring in the library world, cooperation is taking its place alongside others. No doubt this revolution began much earlier and continues to move more slowly than say, the computer revolution. Institutional pride does not always make way for thoroughgoing programs of cooperation among academic libraries. Most would agree that it takes a great deal of discussion to make a little progress. Perhaps it

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2 Ibid.
4 Esterquest, op. cit., 71.
would help to select different words to express the idea of cooperation. Stephen A. McCarthy suggests "library interaction and interdependence" as a possibility.  

Cooperation is already so much a part of us that we tend to overlook how pervasive it is. From interlibrary loans, to Library of Congress cards, to welcoming visiting scholars, we collaborate. The question is no longer whether to cooperate but to what degree.

Historically, cooperation has been around a long time and has manifested itself in the making of union catalogs. As early as 1410 the monk John Boston deBury, in his *Catalog Scriptorum Ecclesiae*, attempted a union catalog.  

In the early 1940s Robert Downs counted 117 national, state, regional, and local union catalogs (including fifty-nine Library of Congress Depository Catalogs) in the United States. Other aspects of cooperation have been thoroughly documented. A simple listing of major cooperative efforts that have been undertaken through the years will suffice for our purposes. The list primarily relates to academic libraries.

1. Union catalogs—from national to local.

7. Cooperative photographic projects—University Microfilms.
8. Cooperation with other types of libraries.
9. Professional conferring—formally and informally, through associations.
10. Resources surveys.
11. Interlibrary loan.
12. Sharing building plans.
13. Combining of academic libraries—Claremont, California.
14. Regional, state, and local consortia.

Part of the problem of understanding cooperation as it exists today is the literature written about it. Cooperative projects, particularly consortia, seldom follow established patterns, and they are not always described with scrupulous accuracy. The tendency to place high intrinsic value on cooperation for its own sake discourages objective evaluation. Far too much of the literature either expounds upon the great possibilities for cooperation or outlines with magnificently detailed what a consortium intends to accomplish. Too few define clearly what progress has been made, what the price tag is, what limits there are, and where the point of diminishing returns is to be found. Admittedly, some of these are hard questions but they need answering. Careful analysis of present practices may be uncomfortable but therein lies the road to improvement.

One gets the impression that some academic libraries find it so much more reassuring (and less time-consuming) to continue convincing themselves that

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9 Esterquest, *op. cit.*, 71-72.
their limited budgets are being put to the best use possible. Since libraries have traditionally been regarded as service organizations, they have been slow to introduce systems analysis and cost accounting procedures. Consequently, there are few accurate pictures of the costs of individual library operations. This is doubly true of the costs of cooperation.

The signs point toward increasing cooperation among academic libraries in the future. The Donne paraphrase, "No library is an island unto itself" is seen to contain more and more truth with the passing of time. One eloquent proponent of cooperation put it this way:

For even the casual reader of professional library publications, it should be increasingly evident that the time is ripe for some realistic thoughts—that is, hard-nosed let's-get-down-to-business thoughts—about cooperation. The volume of publications, the increasing costs of acquisitions plus the labor to cope with them, together with the complexity occasioned by broader services and growing constituencies all make it apparent that the library which refuses to consider workable alternatives, such as pooling of effort, is falling hopelessly behind. . . . The time is not just ripe for cooperation, it compels it.

The knowledge explosion revolution has posed formidable problems to the academic library, particularly the small college library. Estimates of the explosion are interesting, although one should remember that they are only estimates. Knowledge was said to have doubled from A.D. 1 to 1750, doubled again by 1900, again by 1950, and once more by 1960. Some experts believe that by 1967 it had doubled again. More than 2,000 pages of books, newspapers, or reports come off the worldwide press every sixty seconds—the equivalent of seven complete sets of encyclopedias every day. While the United States is annually producing over 30,000 new books, titles, or new editions, the world's annual production of books has been estimated at 320,000 separate titles. These are in addition to 33,000 newspapers, 70,000 periodicals, and millions of research reports, not to mention nearly 100,000 scientific and technical journals being published in more than sixty languages with new journals being born at the rate of two per day. Adding to the above, the significant outpouring of the new media further complicates the magnitude of the problem of selection, acquiring, storing, and circulating just a small fraction of the best produced. One wonders what the wise Solomon's comment would be today. Nearly ten centuries before Christ he wrote, "Of making many books there is no end."

Increased impetus toward cooperation by academic libraries comes also from the greater demand for services, as well as from the sources of support—foundation and government grants, which particularly encourage consortia and other cooperative ventures. "Thus the magnitude of the problem, and the agencies from which support must be obtained, plus the demands for service from readers, all augur a future in which there will be increasing need for libraries to work closely together in ways which they cannot now foresee."

What does all this mean for the small college library? Ralph H. Parker feels that small libraries in their present state are doomed. Just as technology is destroying the small town, the one-room school house, and the small grocer, so it is going to affect the small library.

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13 Ecclesiastes 12:12.
14 McCarthy, op. cit., p. 35.
believes that we are in a transition period in which one of three things will happen to small libraries:

1. Small libraries will become large as small colleges become universities.
2. Libraries will combine. Public libraries more obviously reflect this trend, but look at the Joint University Libraries of Nashville or the Honnold Library, Claremont, California, serving the Associated Colleges of that city.
3. Libraries will cooperate with each other. A national bibliographic network is emerging, in which small and large libraries can receive bibliographic citations instantaneously on a television screen as well as hard copy from books and periodicals via this network within minutes.\footnote{Ralph H. Parker, "The Small Library Faces the Future," \textit{ALA Bulletin} (June 1967), 669-71.}

It is easy to overestimate what can be done in one year and underestimate what can be done in ten, but we may as well be realistic enough to expect major changes.\footnote{Carl F. J. Overhage and R. Joyce Harman, \textit{Intrex}, Report of a Planning Conference on Information Transfer Experiments (Cambridge, Mass.: M.I.T., 1965), p. 43.} Perhaps the prospects for survival of small libraries will be in proportion to their willingness to cooperate.

\section*{Characteristics of Regional, State, and Local Consortia}

In the earlier list of fourteen manifestations of cooperation among academic libraries we included consortia. Mounting evidence points toward the increasing proliferation of such cooperative ventures among colleges. To mention a few of recent origin, one could name the Arkansas Foundation of Associated Colleges (AFAC), begun in 1954; the Associated Colleges of the Midwest (ACM), formed in 1959; the Great Lakes Colleges Association (GLCA), incorporated in 1961; the Area College Library Cooperative Program of Central Pennsylvania (ACLCP), originating in September 1965; LIBRAS, which organized in December 1965.\footnote{Telephone interview with Shirley Birdsall, Librarian, Harding College, Searcy, Arkansas, November 27, 1965.}

In some cases cooperation among member libraries represents only one facet of a broader program of cooperation among the colleges. Cooperation on other levels sometimes preceded library cooperation. The ACM for example, did not begin significant library cooperation until a decade after its origin. In other cases (LIBRAS, ACLCP) interest in library cooperation was the prime factor in establishing the consortium.

Certain patterns of cooperation emerge. Interest in improving interlibrary loan systems has prompted many colleges to enter into cooperative ventures. Procedures become streamlined. In some cases union catalogs are compiled. Some groups which produce a union catalog of periodical holdings also discover it to be more difficult to find time and money to invest in a union catalog of books. AFAC exchanged some book cards for a period of time but has now discontinued it for lack of money, not because it was not helpful.\footnote{Letter from Marilyn T. Thompson, Librarian, George Williams College, Downers Grove, Illinois, November 15, 1968.} LIBRAS is currently constructing a union card catalog of current book purchases.\footnote{Carl F. J. Overhage and R. Joyce Harman, \textit{Intrex}, Report of a Planning Conference on Information Transfer Experiments (Cambridge, Mass.: M.I.T., 1965), p. 43.} Union lists of periodicals, in
some cases, are updated annually (ACLCP); in other cases as many as five years elapse between updatings (AFAC). ACLCP compiled some union lists of special collections but found them of uneven usefulness, depending upon curricular interests of participating colleges. Telephone service and free photocopying facilitate interlibrary loan in many consortia.

Sharing within a consortium often occurs on various levels. Members of a group often exchange acquisition lists, subject bibliographies, library bulletins (including "house organs" such as GLCA Librarian’s Newsletter) and other memos. Librarians participating in consortia universally agree that the contact with other librarians in their periodic meetings, whether monthly (LIBRAS), quarterly (ACLCP), or annually (AFAC), is in itself one of the most significant benefits. Not all are as candid, however, in evaluating cooperation and the place of discussion, as is Russell F. Barnes.

I suppose the best general statement I could use to describe cooperation among Twin City academic libraries would be to say that we spend more time talking about cooperating than we do cooperating. The talk is helpful though, it keeps us acquainted with what we are doing individually and makes it a simple matter to call someone on the telephone and ask a favor, and this is essentially what cooperation amounts to—helping one another.

A highly significant but somewhat irreversible feature of some consortia is the development of subject specializations. Member colleges agree on intensive development of holdings in certain subject areas. Therein lies the key to a small college gaining ready access to a far more sophisticated collection than it could afford on its own. Thereby they sacrifice, to some extent, a well-rounded though small collection in all subjects. Thorough pursuance of this type of specialization demands a permanent commitment to participation in the consortium. Subject specialization carries a price; librarians here usually consider the future carefully before advancing too far too fast. AFAC has engaged in subject specialization for over ten years—long enough that a few individuals have become a bit uneasy on the question, fearing that collections are becoming too specialized for a small liberal arts college.

One unique venture in cooperation is the Periodical Bank established in early 1969 by ACM. Patterned somewhat after the cooperative storage program of the Center for Research Libraries on the graduate level, this undergraduate program breaks new ground. Member libraries gave up about 15 per cent of their periodical collection, either in complete runs of titles or in runs up to the last five or ten years. Each college sent $50,000 worth of materials to the central Bank (located in Newberry Library in Chicago with the main ACM offices). Materials remain either on paper or are put on film, from which printouts are made. The Bank holds only one set each of about 2,000 titles. These are neither esoteric and impractical items nor, for obvious reasons, the most heavily used periodicals. Connections with member libraries through teletype provides same-day service on any desired item.

ACM colleges initiated this plan to reduce current periodical subscriptions in

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individual member libraries to a minimum, as well as to keep from being interlibrary loan parasites to large universities. Disadvantages include the time lag in obtaining hard copy and the fact that browsing among these periodicals is eliminated. 24 Most significant is the irreversible nature of this venture. Other colleges will certainly await further word from this cooperative venture to see what time, experience, and evaluation have to say.

A consortium encourages member colleges to become more uniform in their library service and their approach to library procedures. Thus, for example, nine of the twelve members of GLCA changed from Dewey to LC as a result of two conferences on reclassification. 25 In several cases (LIBRAS, ACLCP) direct-borrowing privileges of undergraduate students among member libraries have been facilitated.

**Summary**

The viable examples of cooperation among small colleges suggest a number of generalizations. Each consortium approaches cooperation differently. While there are many similarities, the differences stand out in bold relief. No standard pattern fits. This is to be expected since no two colleges have the same philosophy and objectives, the same geographical situation, and other factors that bear upon cooperation. Others, therefore, who may be considering the formation of a consortium, have a variety of patterns that could serve as a model.

Those participating in a consortium are enthusiastic about cooperation. Generally they advocate more and more cooperation but no one seems to have given much thought how far to go with it, or at what point to begin to level off. There seems to be little tendency to evaluate present levels of cooperation before more is encouraged. There is a notable lack of information on what the true costs are; most expenses seem to be absorbed into the regular budget and little or no regard is given to isolating the true costs. Most are concerned that the libraries in the consortium are similar in many respects; in other words, they are usually not eager to welcome too many junior colleges or libraries considerably weaker than the average. Librarians are happy that participation in cooperative ventures strengthens their hand in obtaining grants from foundations and government agencies. Appearances indicate that cooperation encourages libraries individually to strengthen their collections in addition to and from the benefits that accrue from the consortium. Participants feel that the time and expense is well worth it, and that they are providing better service to patrons, thereby making a significant contribution to a liberal arts education.

Is library cooperation a panacea or a pitfall? Probably neither if pursued creatively and geared to the local situation. Nor should it be rushed into too hastily lest expensive mistakes be made. The problems are complex because academic libraries are parts of complex institutions. Cooperation involves certain compromises and may affect institutional pride. These factors must be explored and understood carefully. The entire library staff, the administration, and the faculty must be sold on the idea of entering into a consortium before it is attempted. Nelson, Logsdon, and Adams have summarized succinctly the various factors involved in library cooperation:

1. Cooperation is desirable when it benefits the institutions individually

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or makes them more effective collectively.
2. Each participating institution in a cooperative venture must benefit.
3. Cooperation must be a voluntary act.
4. Benefits cannot always be assured in advance.
5. Objective appraisal of results is as critical as advance planning and sound implementation.
6. Cooperation must take into account the legitimate ambitions and present status of individual institutions. A degree of rivalry and competition among institutions is to be expected.
7. Cooperation must not impose uniformities that destroy the special character of individual institutions.
8. Conversely, where economies and benefits can be achieved through cooperation without destroying the special character of institutions, they are not to be feared.
9. No institution is so rich in resources that it can be assumed to have nothing to gain by cooperation.
10. The support of top leaders in each institution is essential.
11. The cooperative effort must be professionally staffed.
12. Cooperation is a means not an end.
13. Effective broad sharing on a comprehensive scale is possible only through a systems approach.
14. An adequate governmental structure must be developed and sustained.²⁶

It would seem that by following this advice and learning from the experiences of existing consortia, cooperation among small academic libraries should increase significantly in years to come.

At this point we have moved only a little from the vantage point described by Ralph Ellsworth nearly twenty years ago upon the dedication of the Midwest Inter-Library Center (now Center for Research Libraries). "We are like mountain climbers in unexplored territory, who, at great cost, gain one peak, only to discover that it is merely a shoulder to another distant, higher, and more formidable range."²⁷

Three Early Academic Library Surveys

Earlier studies have cited the 1938 University of Georgia survey as the first independent academic library survey by outside experts. This paper reports on three earlier surveys—Williams College in 1915, Rutgers University in 1937, and Beloit College in 1938—that have not previously been cited in the library literature. Comments are made on the institution and its library at the time of the survey, on the surveyors—James Wyer, William Randall, and Errett McDiarmid—and on the content and technique of each of the surveys.

NOTE: This paper is based primarily on an examination of copies of the three surveys described. It was supplemented by personal information on the Rutgers University survey, based on nine years experience in that library, and on information supplied by Lawrence Wikander, librarian at Williams College, and H. Vail Deale, librarian of Beloit College. I would like to express my appreciation to those two librarians for their cooperation.

The library survey is now a well-established and effective tool of library administration. Since the mid-1930s, according to a review of Library Literature, at least thirty full-scale surveys by outside experts have been made in American college and university libraries, and unrecorded surveys would probably double that number. In addition to a number of articles dealing with one aspect or another of surveys, the past few years have seen the publication of two monographs dealing with library surveys and their effectiveness.

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The first was E. Walfred Erickson's College and University Library Surveys, 1938–1952. This publication, based on the author's 1958 doctoral dissertation at the University of Illinois, is primarily a study of the effectiveness of the library survey as a means of improving library operations, and Erickson deals only briefly with the history of the academic library survey. He does indicate, however, that "the first university library survey by a team of outside experts as we know it today, according to Library Literature, was made in 1938 at the University of Georgia, which was followed within two years by the surveys of libraries of Indiana University, the University of Mississippi, and the University of Florida." In 1965 the School of Library Service at Columbia University hosted and cosponsored, with the Committee on Library Surveys of the Association of College and Research Libraries of ALA, a Conference on Library Surveys "to review present-day..."
knowledge in the conduct of surveys of various types of libraries.  

At that conference, which dealt comprehensively with surveys, Guy R. Lyle presented a short paper entitled "An Exploration into the Origins and Evolution of the Library Survey." His purpose was "to select a half-dozen or so landmark surveys of the past hundred years, to summarize their accomplishments and methodology, to expose some of the undercurrents which were at work beneath the surface of librarianship, and to hint at the manner in which they affected or were influenced by, or simply provided the setting for, surveys and the development of the survey technique." In a paper of this kind and length, dealing with library surveys of all kinds in libraries of all types, less than two pages could be devoted to the university library survey and its history. Lyle, like Erickson, comments simply that, "The earliest of the institutional library surveys prepared by outside experts was the Report of a Survey of the University of Georgia Library, published by the ALA in 1939."

In 1933 The Carnegie Foundation for the Advancement of Teaching arranged with Walter Crosby Eells, Professor of Education at Stanford University, to undertake a study which would "analyze and appraise the various surveys of higher education." In this classic study, conducted during the academic year 1933-34, Professor Eells identified over five hundred studies, beginning with a survey of Oberlin in 1908, covering various aspects of American higher education. Many of these were national or state surveys including the surveys of libraries by Works, Rosenlof, and Randall; but there were forty-nine printed and fifty mimeographed surveys of individual institutions, including both self-surveys and those by outside experts. In twenty-two of the printed surveys special attention was given to the library, but these of course were not devoted solely to the library, and where outside experts were involved they were generally not librarians.

Given the nature and intent of their studies, it is not surprising that Erickson and Lyle cite the University of Georgia survey in 1938 as the first survey of an academic library by an outside expert. That survey was the first survey published by the American Library Association, thus giving it a stamp of authority, and as Lyle points out, it "contributed substantially to shaping the pattern of future university library surveys." It was a landmark and richly deserves the honor it has been accorded.

Given the scope and magnitude of Eell's study, however, it is surprising that he fails to cite what must certainly be the first survey of an American college library by an outside expert. That honor clearly belongs to James L. Wyer's printed Report on the Library of Williams College in 1915. There were, in actual fact, three separate library surveys conducted by outside library ex-

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11 Conference on Library Surveys, op. cit., p. 15.
experts prior to the 1938 University of Georgia survey. The two later, unpublished surveys, which took place after Eell's study, were one conducted by William M. Randall at Rutgers University in 1937 and one conducted by Errett W. McDiarmid at Beloit College in early 1938.

At this point in time a study of the effectiveness of these three surveys in improving library operations at those institutions would be of little value. Erickson has, in general, shown that the survey is an effective tool and, in any case, the passage of time would make it almost impossible to measure their effectiveness. There is also obviously no point in trying to emphasize their influence on the techniques of the library survey for the very fact that they have not been previously cited means that their influence was virtually nonexistent. They do deserve recognition and notice. It might be interesting, therefore, and perhaps constructive simply to treat them briefly as historical documents from a particular point in time and to examine each of them briefly as such.

**The 1915 Williams College Library Survey**

In 1915 Williams College was an undergraduate liberal arts college, with no graduate or professional schools, serving a student body of five hundred and a faculty and staff of seventy-five. The libraries of the college contained about 82,000 volumes and were adding between 2,000 and 3,000 volumes annually. John Adams Lowe, who was to be librarian of the Rochester Public Library from 1932 to 1952, had resigned as librarian and submitted a final report which contained suggestions. As has often been the case in later surveys, it was undoubtedly Lowe's resignation and report and the need for a new librarian, combined with the obvious need for a new building, that prompted the Board of Trustees to employ James L. Wyer to conduct a survey of the Williams College Library.

In 1915 Wyer had been director of the New York State Library and the New York State Library School for seven years. Forty-six years old, he had, after a brief career as a bank cashier, served as an assistant in the Minneapolis Public Library for a short time prior to becoming a student at the New York State Library School and an assistant in the New York State Library in 1897. He received his BLS from that school in 1898 and his MLS in 1905. He was librarian and professor of bibliography at the University of Nebraska from 1898 to 1905, before returning, as reference librarian in the New York State Library and vice-director of the New York State Library School in 1906. He was president of the American Library Association in 1910-1911 and had written numerous articles on the academic library. He received his PhD from New York State College in 1919, but his book *The College and University Library* was not published until 1921.\(^\text{12}\) He had already, however, contributed an eighteen-page chapter on "The College and University Library" to the first edition of the *Manual of Library Economy* published by the ALA in 1911. Utilizing the same simple definition as Erickson,\(^\text{13}\) there is no question but that Wyer in 1915 was extremely well qualified as a library expert.

His survey of the library situation at Williams College in 1915\(^\text{14}\) is an inter-

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\(^\text{13}\) Erickson, op. cit., p. 14, "Webster's New International Dictionary defines the expert as 'one who has a special skill or knowledge in a particular subject, as a science or art, whether acquired by experience or study,' and it is this simple definition which will be used in this study."

testing report which, in several ways, foresees the development of later surveys as manifested in the 1938 University of Georgia survey. After only a brief statement about the college and its setting, Wyer makes the following recommendations: (1) that an addition to the existing library building should be built to provide relief until the new library building, which the college authorities agree is needed, can be provided; (2) that more adequate salaries should be paid, and that, in particular, the librarian to be appointed should be paid a professional salary and be worth it; (3) that the local classification scheme should be abandoned in favor of "some established system which is already carefully formulated and for the use of which printed aids exist that immensely simplify the work of classification" and that a careful plan for reclassification be worked out; (4) that "all the books owned by the college should be under library jurisdiction and care" with centralized control of acquisitions and with the division of book funds to be left to the discretion of the librarian; and (5) that some fairly detailed comments given on the new library building and its specifications should be considered.

While much of his report is devoted to the specifications for the new building and to the new librarian, his calls for reclassification using an established scheme and for centralized administration of the library are, indeed, forerunners of similar recommendations in many future academic library surveys.

It is, however, some of the comments made almost in passing that are of most interest today. Wyer comments, for example that, "The book funds now provide each year a comfortable and reasonably adequate sum for books, binding and periodicals. Free from the necessity for the costly books and periodicals required for graduate and professional work, the present annual income should meet the needs of the college for books indefinitely." He also made these comments on the likely growth of the library:

Williams College library now has 82,000 volumes and is adding, or is able to add, 3,000 volumes per year, an increment which will tend to increase. It is likely that within the next fifty years 170,000 will be added. . . . There may be a question as to how large a satisfactory library for a college of this size ought to be. This is largely a matter of speculation, for no college library in this country has reached a point where it fails to need more books or where it feels that the removal or segregation of obsolete or worthless books will counterbalance the current additions. . . . He is a bold man who will say that 400,000 or 500,000 volumes in Williams College Library (figures which probably will be reached within the next century) are as many books as will ever be needed.

This report, done at the time when the general academic survey itself was still a relatively new technique, is a remarkable document. If the dates, figures, and a few dated expressions were removed, it would be difficult to distinguish much of this report from a contemporary academic library survey. Even many of his remarks about the building program have a contemporary

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18 The library at Williams College is now located in Stetson Hall, which was erected in 1922.
19 Ibid., p. 60.
20 Ibid., p. 61.
ring to them. Wyer very perceptively points up the setting of the library in the institution and the community, analyzes the problems it faces, and makes sound recommendations to guide its future growth and development.

THE 1937 Rutgers University Library Survey

In 1937 Rutgers University had approximately 2,100 undergraduates, 125 regular graduate students, and a faculty of 225. In 1932 a Graduate Faculty had been created to control and guide the growing graduate program, and in 1936 the Rutgers University Press was established. "As attention turned toward scholarly activity, a new appreciation of the need for improving the library developed. Adequate for the purpose of undergraduate instruction, with nearly 250,000 volumes, the library was housed in a building that had long since become crowded to capacity and was handicapped by inadequate staff and a minuscule book fund. Although many years were to pass before these grave problems could be solved, they were at least given recognition by those who foresaw that the growing emphasis on graduate instruction and research would require library facilities and resources vastly larger than those available." 21

George A. Osborn began working in the library shortly before his graduation from Rutgers College in 1897 and remained to become librarian in 1907. In 1934 he prepared a report outlining the deficiencies in the building, the book fund, and the staffing. By 1937 little progress had been made. It was in this setting then that William Randall was employed to make a survey of the library.

Randall, 38, was a professor at the University of Chicago Graduate Library School, and had been a faculty member there since 1929. He had received an AB from the University of Michigan in 1921 and an AM from that institution in 1924. Randall worked as a classifier in the University of Michigan library from 1923 to 1925 and then moved to Hartford, Connecticut, where he was an instructor in linguistics at the Kennedy School of Missions while working on a PhD, which he received in 1929 from the Hartford Theological Seminary. The editor of Library Quarterly since its inception in 1931, Randall had written a number of articles on the college library, and had recently produced the first edition, with Frances L. D. Goodrich, of Principles of College Library Administration (Chicago: American Library Association and the University of Chicago Press, 1936). He was also the author of the descriptive study of college libraries mentioned above which was an outgrowth of the investigations made by and for the Advisory Group of College Libraries of the Carnegie Corporation of New York under the chairmanship of William W. Bishop. 22 There is no doubt that Randall was well qualified as a library expert.

Randall's survey resulted in a nine-page mimeographed report entitled "Report on the Library Situation at Rutgers University, November, 1937." About one-third of the report is devoted to a general statement of what a university library should be, beginning with the comment that "the library of a university has the general functions of acquiring and preserving accessibly the books required to meet the needs of the institution." 23 Randall made a number of specific recommendations for the improvement of the library situation at

20 E.g., "Especially should there be, so far as possible in a building to be used by many persons, an atmosphere of privacy, of intimacy, of invitation..." p. 62.
Rutgers. These included: (1) the appointment of a professionally trained assistant, or associate librarian; (2) the amalgamation of the library of the New Jersey College for Women into the administrative structure of the University Library; (3) the elimination of the technical staff at that library and the centralization of technical processes in the Rutgers University library; (4) the addition of at least five professional staff members; (5) the payment of higher salaries in order to attract more competent and better-trained staff; (6) the erection of a new library building; (7) the need for additional book funds since "Rutgers has failed to provide a reasonably adequate sum for books during the past decade"; (8) the establishment of a single divided catalog to be duplicated by photographic means for the library of the New Jersey College for Women, for the entire University collection.

Randall's general conclusion was that, Rutgers University is a first class institution, with a long tradition of excellence, rendering an important service to its state and to the nation. Its library, which is one of the most important units in its educational and research apparatus, is considerably behind the remainder of the institution in plant, support, and personnel. Until this situation is corrected, the entire University suffers from an inadequate service at a vital point in its program. The University Administration will do well to make the library a major care and responsibility on its budget during the next years.

From this standpoint in time the most interesting aspects of the report are the comments that Randall made, simply in passing, and a number of years before the general establishment of undergraduate libraries, on the function of the library of the New Jersey College for Women. Because of its geographical proximity to the Rutgers University library, Randall stressed the fact that the faculty of that college should rely on the Rutgers University library for its research needs and that their own library "should be . . . only a collegiate library concerned with furnishing book service to the undergraduates of the Women's College. As such, it should have a librarian fitted by experience, personality, and training to render skillful and sympathetic assistance to students. . . . The book collection should be small—probably not larger than 25,000 to 40,000 volumes at any time."

Done just prior to the time when the academic library survey was about to come into fruition, Randall's survey is, for that reason, not as remarkable as Wyer's survey of the Williams College library. Nevertheless it is a sound and sensible report, which represents a good analysis of the library situation at Rutgers in 1937, although perhaps too large a part of it is devoted to general comments on the function of a university library.

THE 1938 BELOIT COLLEGE LIBRARY SURVEY

In 1938 Beloit College was an undergraduate liberal arts college serving a student body of about six hundred and
a teaching faculty of about fifty. The library contained over 92,000 volumes and was adding about 2,000 volumes annually. In an effort to upgrade the library the Library Committee of the college faculty undertook a survey of the library, retaining Errett W. McDiarmid as a consultant.

Of the three surveyors, McDiarmid was perhaps the least qualified as an expert at the time of the study here under discussion. Only 28 years old in 1937, he had received his BA in 1929, his MA in 1930 from Texas Christian University, and his AB in Library Science in 1931 from Emory University. After receiving his PhD from the University of Chicago Graduate Library School in 1934, McDiarmid had been librarian at Baylor University from 1934 to 1937. At the time of this survey he had just become an associate in the University of Illinois Library School. His later career included promotion to associate professor in the University of Illinois Library School and, from 1943 to 1951, McDiarmid was to be university librarian and director of the Division of Library Instruction at the University of Minnesota. Although his book The Library Survey was not published until 1940, McDiarmid had already published a number of articles on various aspects of the academic library. 29

The earlier surveys conducted by Wyer and Randall are the product of those two men's casual, often almost superficial, overview of institutions and their libraries. While both report that they discussed the library with a variety of administrative officers, faculty, and library staff (but not students), their reports reflect only their own thoughts and opinions.

McDiarmid's twenty-four page mimeographed report on the Beloit College Library 30 on the other hand, is more nearly a forerunner on the "modern" survey in technique. He worked very closely with faculty and students, had detailed questionnaires prepared, completed, and tabulated, and reported faculty and student opinion of the library and of its strengths and weaknesses. To a large degree McDiarmid was only the director of "a cooperative venture on the part of administration, faculty, students, and library staff." 31

The faculty were asked to indicate, using checklists, what library services they used, what new services they would like to see the library staff provide, and how they encouraged effective use of the library. Students were asked to answer a variety of questions about their use, or nonuse, of the library, and their degree of satisfaction, or dissatisfaction, with it. In addition, a checklist of 1,000 titles was constructed, largely from the ALA Booklist Books for 1932 to 1936, and checked against the Beloit library holdings.

Most of McDiarmid's comments are based on the tabulations of those formal questionnaires and checklists. The recommendations that he made stemming directly from those sources of information were: (1) that special consideration be given to library resources in three specific subject fields; (2) that a systematic attempt be made to improve the general collection of the library; and (3) that additional trained staff be made available. In addition, McDiarmid made some comments based on his own background, experience, and observations. These included his recommendations, first for a new library building, or failing that, extensive redecoration of the existing building, and second, for an increase in the budget.


30 Errett W. McDiarmid "Report of a Survey of Beloit College Library" (mimeographed report dated March 29, 1938).

31 Ibid., p. 1.
Although not directly apparent in his recommendations, the most interesting aspect of McDiarmid's survey is his comment on the general adequacy of the Beloit College library and his views on what a good library should be. He began by indicating that the goal which the college has recently set for itself "by direct implication, presupposes an efficient and up-to-date college library." His analysis of the responses to the faculty questionnaire was that they realized quite clearly the need for strong collections, individualized service for the faculty, and training of students in library use, but that the library was missing that mark. His chief criticism was that "the library has made its resources available when requested." His summary of the situation was that:

1. The library has not been the active instructional force that it must be to serve Beloit effectively.
2. The library has not served the faculty to the extent that the faculty expect and desire.
3. There appears to be a high degree of faculty effort in stimulating library use beyond required reading with satisfactory results.
4. General reading deserves more emphasis, in actual amount being, at present, very low.

McDiarmid was quite clear in emphasizing the role of the library as an instructional device and in indicating that the primary deficiency of the Beloit College library was its inability effectively to fill that role. The technical and administrative aspects of the library's operation were of little or no concern to McDiarmid. Even his comments on a new building ("a college workshop planned for student and faculty use") or redecoration of the existing building ("to provide better lighting and more attractive surroundings") reflect this interest. This report is a very strong statement of what is now called the library college idea and obviously owes much to the thinking of B. Lamar Johnson and Harvie Branscomb.

**Conclusion**

These three surveys represent the earliest independent approaches to the academic library survey. Each is interesting, but each is incomplete. Although Wyer comes remarkably close, no one of them adequately covers all of the components of the good university library as outlined by Louis R. Wilson in his preparations for the 1938 University of Georgia Library Survey. Nor does any one of them approach the present concept and detail of the methodology of the academic library survey as outlined by Tauber. They were the tentative beginnings of an approach to the improvement of library operations that has subsequently flourished and become a major tool. It is somewhat heartening to see how far the technique has developed. However, it is somewhat disheartening to see that the same basic individual library problems that faced Williams in 1915, Rutgers in 1937, and Beloit in 1938, remain, and that little progress has been made in solving them on a broad scale.

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55 Ibid., p. 21.
56 "These related to collections adequate for carrying out the objectives of the university, a staff large enough and sufficiently well trained to afford a high level of library service, materials effectively organized, a good physical plant and modern equipment, close library integration with the administrative and educational policies and practices of the university, regional library resources, and adequate library finances." Conference on Library Surveys, op. cit., p. 14.
57 Maurice F. Tauber, "Surveys by Librarians," CRL, XV (April 1954), 188-96. See especially the section "Methodology," p. 193-95, which describes in detail the procedure Tauber and Jesse used in their survey of the Virginia Polytechnic Institute Library in 1949. The following passage gives some idea of the detail, "Use of an ediphone made it possible to transcribe materials from confidential reports and interviews. Approximately 20 cylinders of material were recorded before the surveyors left the campus." (p. 194).

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Subject Searches Using Two Catalogs: A Comparative Evaluation

This paper reports the results of a study undertaken to determine if dividing a traditional dictionary catalog would result in an increase in the effective use of university library catalogs. Two catalogs—one in dictionary arrangement, the other divided into subject and non-subject entries—were selected and the appropriate sections matched. Participants were chosen at random from the undergraduate population of the two universities. The results indicated that, for a series of questions representing different levels of difficulty, a change in arrangement from dictionary to divided would not materially assist college undergraduates in finding subject references.

To the Library Administrator, the catalog represents a substantial investment in funds, time, and personnel. Still indispensable as an index to the collections of most libraries, the catalog is nevertheless criticized for its limitations as a wholly effective tool for librarian or patron. Faced with selecting the best method to prepare, arrange, and maintain the catalog, the administrator must weigh a complex combination of factors that represent two basic variables, cost and effectiveness. He can bring to his consideration a wealth of testimony but very few objective findings. This paper reports the results of a study investigating the proposition that dividing the catalog will result in improved effectiveness for patrons seeking a subject approach to the library’s collection.

The Divided Catalog

Although a catalog might be divided on a number of different bases, the term “divided catalog” is commonly understood to denote an arrangement whereby the subject entries and the author and title entries are put separately into two alphabetical sequences. This plan differs from the “dictionary catalog,” which places all three sorts of entries into a single sequence. The concept of the divided catalog can be traced to an article written by William I. Fletcher, librarian of Amherst College in 1905. Concerned that the dictionary catalog could not continue to cope with the complexities arising from the ever-increasing size of library collections, Fletcher advocated removing the sub-

Dr. Krikelas is Assistant Professor of Library Science in the University of Wisconsin. This article is based on the author’s paper, “The Effect of Arrangement on the Successful Use of Library Catalogs” (unpublished PhD dissertation, University of Illinois, 1967). The study was done at the Library Research Center, University of Illinois, under a grant from the U.S. Office of Education (OEG-3-7-070014-1630).
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ject entries to a separate file as he had done in his own library.1 His proposal evoked little response and thirty years passed before the divided catalog was again prominently espoused. In 1935 Donald Coney asserted that “the catalog confuses the user with a wealth of detail in unfamiliar form.” He suggested that the dictionary catalog be simplified by dividing it.2

In the years following Coney’s article, a substantial body of literature on the subject has been produced.3 A review of this literature reveals that no previous study has attempted to establish a clear relationship between the type of arrangement and the successful use of the catalog. Although writers since Coney have seen in the divided catalog a promise of simplified filing and reduced congestion at the catalog, these supposed benefits are elements of the cost variable rather than the effectiveness, which is the focus of this study. These articles and other specific investigations of catalog use, summarized by Stevens,4 Tauber,5 and Frarey,6 have identified a number of obstacles to effective searches of the catalog for subject references. These difficulties are relevant to the problem under investigation.

Occasionally the patron expects to locate material, such as periodical articles, that is not traditionally analyzed in the catalog. Sometimes he fails because he bases his search on incorrect bibliographic information. Perhaps most often he is unable to select the appropriate term, or he approaches the catalog at a different level of specificity than is necessary to achieve a successful search.

Dividing the catalog would not solve all of these problems. For the most part, these difficulties stem from a lack of sophisticated knowledge by the patron rather than from the arrangement of the catalog itself. Division, however, might well reduce the confusion between subject and non-subject entries. One example of such confusion has been reported by Margaret C. Brown. Observing a graduate student seeking information on the subject “Rural Recreation” she noted:

Next the student went in search of any subject which began with the word “ru­ral.” Here several titles relative to the subject were found. The student was highly pleased with this development but quite unaware that these were title entries.7

The number of potential conflicts is higher than at first might be expected. Various rules of cataloging tend to suppress similarities between the subject of a book and the title of that book in favor of the subject entry. Other subject headings, however, are identical in form to main or non-subject added entries. Hence references to material by or about an individual, society, institution or governmental agency will use the same terms for the heading whether they are main or secondary entries. To emphasize the difference between identical headings for different concepts, two general devices are used. One method is to vary the typographical presentation

2 Donald Coney, “The Librarian and the Catalog,” ALA Bulletin, XXIX (September 1935), 593-94.
4 Rolland E. Stevens, A Summary of the Literature on the Use Made by the Research Worker of the University Library Catalog (University of Illinois Library School, Occasional Papers, No. 13, Urbana, 1950).
7 Margaret C. Brown, “The Graduate Student’s Use of the Subject Catalog,” College & Research Libraries, VIII (July 1947), 203-08.
by indicating subject entries in red ink or in capital letters and all other entries in conventional upper and lowercase form. The second device is to treat each type of heading as a separate file. In the dictionary catalog, subject cards are filed after the identical headings for main and added entries; in the divided catalog, all subject cards are removed as a body to a physically separate file.

Some evidence and much testimony indicate that the typographical devices are often too subtle for the lay user of the catalog to recognize. In large or highly specialized catalogs the great number of possible conflicts compounds the confusion. Since the divided catalog, at least in theory, tends to identify the subject entries unambiguously by segregating them, there is reason to suppose that the divided catalog would be more effective for subject searches than the dictionary catalog. Therefore, if the same person made identical subject searches in two catalogs, one divided and one dictionary, it can be assumed that his difficulties would be common to both catalogs except that, in the divided catalog, title and other conflicting entries would not be confused with subject entries. This concept can be restated into the following specific hypothesis and tested empirically:

Assuming all other factors are equal, subject searches using a catalog in which the subject entries have been separated (i.e., a divided catalog) will produce more pertinent references and fewer inappropriate references than identical searches using a file combining all entries into a single (dictionary) sequence.

Design of the Study

Ideally, the simplest design for testing an hypothesis of this nature would be to have the same patrons conduct the same searches twice, first with a catalog of a given arrangement and, second, with the same catalog after it had been rearranged in ways assumed to improve it. A comparison of the amount of success achieved using each form of the catalog would measure the effect of the modification of the catalog on success in the searches. In practice, however, it is difficult to control the possible effect of a particular patron's prior experience and familiarity with one of the two catalog arrangements. Moreover, the second search is likely to be biased toward success by the patron's memory of the first search. Moreover, modifying the catalog to set up "before-after" comparisons would seriously inconvenience an operating library and its patrons.

An alternative design is to locate two catalogs that are largely alike except in arrangement. By judicious control of the type and number of searches to be made, the study can be restricted to specific sections rather than the whole of the catalogs. Use of catalogs at different institutions, however, makes it difficult to employ the same patrons as participants in both parts of the study.

An accepted solution to this problem of design is to match individuals at the two institutions, to give them identical search problems, and to treat the results as those of one person. Matching individuals presents obvious difficulties, but as is pointed out in one research text:

The more precise the matching and the greater the number of factors on which matching is to take place, the greater the number of cases for which no match is available. Fortunately, however, relevant factors are often so interrelated that matching on one factor brings with it partial matching on other factors; there is a "diminishing return" as additional factors are controlled.9

The key problem then is to select for purposes of matching those characteris-

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Subject Searches Using Two Catalogs

tics that are most closely related to successful use of library catalogs. No previous study has succeeded in reaching definitive conclusions as to the characteristics that are clearly crucial to success in catalog use. It was necessary, therefore, to assume in this study that the two most important factors are experience and familiarity. For the user-universe of college undergraduate students selected for this study, these factors were measured by the student’s class standing expressed in number of semesters on campus and the frequency of use of the main college catalog. Evidence as to the validity of this basic assumption was gathered in the course of the investigation, and the analysis of these data is reported as part of the results of the study.

Beyond selecting the catalogs to be used and the respondents to be tested, it was necessary to plan the pattern of the actual searches. Traditionally, catalog-use studies have observed an individual at the catalog, have noted the purpose of his search, and then have judged success or failure from a determination by the investigator or by the respondent himself that what he found did or did not achieve the original purpose. Under such circumstances the interpretation of success or failure itself can be questioned and, in any case, many other factors than the catalog alone are likely to be involved in the outcome.

In order to limit variations to differences in catalog arrangement alone, it was deemed advisable to develop in advance a battery of test searches rather than to leave their selection to the respondents. The problems were chosen to include examples of identical headings that represented main entries, subject entries, and other added entries. Further, to determine whether a confusion of type of entry is the actual source of difficulty rather than simply a general perplexity, the problems required use of a selection of traditional subject headings.

Evaluation of the success or failure of the searches was planned to be as objective as possible. Degree of user satisfaction was rejected from the outset as a sufficient test of effectiveness. Even reliance upon the fact of locating an apparently relevant document was not considered enough, since relevance is a function of the subjective purpose of the user. Therefore, it was decided in advance to make the critical test the location of cards bearing predetermined subject headings rather than references to any specific documents.

A card was determined to be relevant only if it contained the exact subject heading requested. It was anticipated that participants would indicate all, some, or none of the pertinent references and none or some non-pertinent cards. In order to make the results comparable a “success ratio” for each search was computed. By taking an average of these success ratios for each student, a “mean success” score was determined for each participant. In the development of these scores three factors were considered: (1) the number of relevant references retrieved; (2) the predetermined total number of relevant references in the file; (3) the total number of references retrieved (whether relevant or not) by the participant. If the number of relevant references retrieved was zero, the success ratio, by definition, was scored as zero.

It must be emphasized that this success score was developed only to identify the relative success of the individual participants in locating pertinent references. In no way was it proposed that this measure would also be appropriate for other types of tests. Furthermore the success ratio did not indicate why some participants had only partial, rather than complete, success. Such analysis of
causes of failure was undertaken separately and is also reported. For a given set of structured search-problems, however, the users of the two types of catalogs could be compared meaningfully and the expected differences between the matched pairs tested for statistical significance.

Collection of the Data

Because of certain basic similarities, two large universities were selected as the setting for this study—one with a conventional dictionary catalog and the other with a divided (author-title and subject) catalog. Both schools are large, midwest, state-supported institutions of national reputation. Although not identical, the two schools are also similar in the distribution of the undergraduate student body according to class standing. On the other hand, there is a discrepancy in the size of the two collections that could have an effect on the attempt to locate comparable sections in the two catalogs. A preliminary inspection of both catalogs, however, indicated that many of the search-problems selected at one school involved use of file sections similar in size at both schools. The catalogs were also alike in many other ways with only one major difference deemed to be a potential difficulty.

The one important difference occurred in the matter of filing. In particular, the rule affected the filing order of subordinate agencies and had direct applicability to the study. In the divided catalog, subordinate agencies (e.g., The United States Civil Service Commission) were filed after the general heading “U.S.” and its appropriate subject subdivisions. In the dictionary catalog, these subordinate agencies were considered, for filing purposes, to be indistinguishable from subject subdivisions. For example, subject entries for various headings under “United States” appear in the two catalogs in the following order:

Divided Catalog

- U.S.—ALTITUDES
- U.S.—BIBLIOGRAPHY
- U.S.—CIVILIZATION
- U.S.—FOREIGN RELATIONS
- U.S.—HISTORY
- U.S.—POLITICS & GOVERNMENT
- U.S.—STATISTICS, VITAL
- U.S.—TERRITORIAL EXPANSION
- U.S. ARMY
- U.S. ARMY—BIBLIOGRAPHY
- U.S. LIBRARY OF CONGRESS
- U.S. WEATHER BUREAU

Dictionary Catalog

- U.S.—ALTITUDES
- U.S. ARMY
- U.S. ARMY—BIBLIOGRAPHY
- U.S.—BIBLIOGRAPHY
- U.S.—CIVILIZATION
- U.S.—FOREIGN RELATIONS
- U.S.—HISTORY
- U.S. LIBRARY OF CONGRESS
- U.S.—POLITICS & GOVERNMENT
- U.S.—STATISTICS, VITAL
- U.S.—TERRITORIAL EXPANSION
- U.S. WEATHER BUREAU

Thus a search for subject cards for the entry “U.S. Civil Service Commission” should be made between “U.S. Army—Bibliography” and “U.S. Library of Congress” in the divided catalog. In the dictionary catalog, “U.S. Civil Service Commission” would appear between the entries for “U.S.—Bibliography” and “U.S.—Civilization.” Rather than eliminating such examples, it was decided to include them and, through analysis, to determine if this was the cause of success or failure more frequently at one school than at the other.

The actual selection of the search problems was achieved by random sampling from the dictionary catalog. The objective of the sampling was to obtain a list of personal, corporate, and uniform entries that could be compared with the divided catalog. A list of two hundred conventional subject headings was also compiled by sampling from the Library of Congress subject headings.10

The dictionary catalog was re-audited to determine if these subject headings

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were actually used and to assess the feasibility of including them as problems.

Prior to the final comparison of the appropriate sections of the two catalogs, a pre-test was conducted. The purpose of the pre-test was: (1) to determine the effect, if any, of the alternative ways of wording the questions; (2) to determine the total number of questions that might be tested in a one-hour period; and (3) to determine if patterns of search actually were similar enough to predict the general sections of the catalog that should be compared.

Analysis of the results of the pre-test indicated that the students' responses were related to the nature of the question rather than to the way the question was worded. It was also determined that the final exercise would require, on the average, about forty-five minutes. The remainder of the hour was set aside for explaining the procedure and for post-test interviews.

Observation of the procedure and patterns of search during the pre-test also supported the expectation that for specific requests the appropriate sections of the catalog could be determined. There were instances when the participant elected to search the catalog for less specific subjects than the ones requested in the problem. Interviews following the exercises revealed that rewording the subject request would in no way have made it clearer to the student that such a subject actually was used in the catalog. Of particular interest was the relatively consistent pattern of search whether it was for the precise subject heading or for a less specific term.

The final comparison of the two catalogs was conducted two weeks prior to the commencement of the testing. To test the assumption that known-item searches would not be affected by the arrangement of the catalog, two questions asked the respondent simply to locate given author and title entries. The remaining questions were subject searches and consisted of requests for cards concerning a specific work of one author (a literary criticism), three conventional subjects, two personal-name entries as subjects, and three corporate entries as subjects.

The participants were selected at random from the undergraduate population of the two universities. Since lists of the student population by classes could not be secured, the student directories of the respective schools were used. Random selection was used only to reduce any unknown bias in response rate that might have resulted from other selection techniques. The anticipated statistical tests also indicated the desirability of having at least thirty matched pairs. Letters requesting the participation of the students were mailed so as to arrive during the first day of the second semester of the 1966-67 academic year.

In all, 171 students took part in the study although twenty-three were unable to complete the search-problem exercises within the allotted period of time. In addition, four students listed as underclassmen in their respective directories were found to be enrolled in professional programs and in their fifth or sixth year of college. These students were also deleted from the study. The final number of usable scores was fifty students using the divided catalog and ninety-four using the dictionary catalog, a total of 144 participants.

The procedure in conducting the search exercises was similar at the two schools. Students completed a "general information form" containing requests for personal data before proceeding. As each participant searched the catalog to find the appropriate cards, the investigator noted the procedure as well as the final decision. Every effort was made to
secure information about where the individual searched, what specific heading he had in mind, and the type of difficulty, if any, that he encountered. During the instruction period students were told that the test questions had been selected at random and that some of the requests might not represent areas of interest to them. It was assumed, however, that the student could cope with the request at a level determined by his basic knowledge about the catalog. At the end of each session, a post-test interview was conducted. One of the questions asked of the participant was “Did you find that the problems and your responses were a fair indicator of your general knowledge of the scope and arrangement of the catalog?” The replies of the students, admittedly testimonial, gave no reason to suspect the validity of this approach to measuring effective use.

Matching the Students

In very general terms, the matching was successful to the extent that thirty-one pairings were made. Although there were some minor differences between the matched pairs, every effort was made to have the two primary criteria (“semesters on campus” and “frequency of use of the main catalog”) as equal as possible. Basic information about the participants was entered on cards and used to separate students into groups according to the number of semesters on campus. These groups were subdivided into categories according to the frequency of use of the main catalog, and subsequent matching was accomplished by scanning other characteristics.

In order to compare the two primary criteria with other potentially useful characteristics for matching, a series of questions was asked of the participants on a “general information form.” Data on the following characteristics were collected: (1) semesters on campus and class standing (also converted to semesters in college) as measures of exposure to the catalog; (2) frequency of use of the main catalog as a measure of familiarity; (3) sex; (4) cumulative grade point average; (5) most common approach to using the catalog; (6) the type and amount of instruction received in “how to use the library”; and (7) work experience in libraries.

The procedure for analyzing these data was to investigate the relationship between personal characteristics and the student’s performance. This analysis was based on the concept that one or more characteristics could be shown to be related to the mean success score at each school. By examining these characteristics it could be determined if they were common to the students at both schools and therefore generally applicable as criteria for matching. The analysis was made for each group of students so that for each school identical questions (a constant) were searched using the same catalog (also a constant) by different participants. Hence, the differences in success scores for each group could be attributed to the participant’s conduct of the search, rather than to the question or the catalog.

The relationship between the various characteristics and performance was determined by computing some measure of association where applicable. For data given in interval measures, a Pearson product-moment correlation was calculated and the resulting correlation coefficients tested for significance using a table of expected values. For data that lent themselves to natural dichotomies (e.g., sex, instruction, and work experience), a point biserial correlation coefficient was calculated and tested for

statistical significance using a t-test. Finally, for a few of the characteristics, mean success scores were grouped and the differences between the means of these groups were tested using analysis of variance.

It should be noted, however, that these analyses (only summarized here) must be considered tentative at best. The purpose of the random selection procedure was to minimize response bias and to ensure the best chances for matching. The sample cannot be considered—nor was it intended—to be a true probability sample of the undergraduate population at either school. Therefore the inferences apply to the participants only.

The analysis of the relationship between personal characteristics and mean success score for the study groups indicated no significant association except for grade point average. This relationship was limited to the larger study group using the dictionary catalog and even here the relationship was so low that it accounted for less than 5 per cent of the variance. Nonetheless the matching procedure was reviewed in respect to grade point average, but there was no evidence that the matching procedure followed was in any way invalid. In fact, given a much larger sample from each institution the simple process of random pairing without attention to these characteristics would have been appropriate.

An effort to determine the fairness, if not the validity, of the test exercises was also undertaken. Although the mean score of each question was expected to vary from school to school, it seemed reasonable to expect that the relative difficulty encountered in the eight problems would be the same for each group of students. Therefore, it was predicted that if each question were ordered by degree of difficulty as represented by the mean scores, the rank order would be the same for both groups. A Spearman-rho rank order correlation coefficient ($r_s$) was computed, and since the calculated value, $r_s = .922$, was significant at the .05 level, it was concluded that each question represented the same degree of difficulty and was not biased in favor of either group.

**Analysis and Results**

The primary objective of the study was to test the hypothesis that dividing the library's catalog would permit improved use of the catalog by library patrons. For the specific empirical test described, the original hypothesis can be restated as follows:

Assuming all other factors are equal, the mean success score for an individual using a divided catalog will be significantly greater (statistically) than the resulting score for the same searches using a dictionary catalog.

The test for significance is one of computing a $t$-statistic by dividing the difference between the means for each group by the standard error of the difference for the matched groups. Mathematically this would appear as:

$$ t = \frac{\bar{X}_1 - \bar{X}_2}{S_{\bar{X}_1 - \bar{X}_2}} $$

For thirty-one matched pairs (i.e., thirty degrees of freedom), the expected value of the $t$-statistics at the .05 level for a one-tailed test is 1.697. That is, a value of $t$ calculated from the test group can be expected to be 1.697, or less, by

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chance alone ninety-five out of one hundred times.

The experimental data were tested and found not to be significant. Specifically, the value of the experimentally derived $t$ was:

$$t = \frac{.456 - .393}{.0411} = 1.537.$$  

From this evidence, there is no reason to reject the null hypothesis that no difference exists between the two groups. Since subsequent analysis showed that one of the questions was affected by some intervening factor, the test was recomputed for only eight subject searches. Again, while the value of the calculated $t$-statistic was higher ($1.678$), it too was not significant at the .05 level. Assuming the validity of the various underlying assumptions appropriate to the procedure for matching and testing, the divided catalog did not appear to be more effective for the participants.

In order to collect evidence to support the hypothesis that differences in arrangement do not affect known-item searches, two non-subject requests were included in the exercises. Table 1 is a summary of the per cent of success and failure in locating the call number for a book by Ernest Nagel. The table is based on the responses of all students completing this problem.

**TABLE 1**

**RESULTS OF THE SEARCH FOR THE CALL NUMBER FOR THE “NAGEL” BOOK**

<table>
<thead>
<tr>
<th>Catalog Used</th>
<th>Number of Students</th>
<th>Per Cent Found</th>
<th>Per Cent Not Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divided</td>
<td>51</td>
<td>98</td>
<td>2</td>
</tr>
<tr>
<td>Dictionary</td>
<td>103</td>
<td>98</td>
<td>2</td>
</tr>
</tbody>
</table>

The second question requested the reporting of the call number for the Warren Commission Report. The responses for all students completing the search are given in Table 2.

**TABLE 2**

**RESULTS OF THE SEARCH FOR THE CALL NUMBER FOR THE “WARREN COMMISSION REPORT” QUESTION**

<table>
<thead>
<tr>
<th>Catalog Used</th>
<th>Number of Students</th>
<th>Per Cent Found</th>
<th>Per Cent Not Found</th>
</tr>
</thead>
<tbody>
<tr>
<td>Divided</td>
<td>54</td>
<td>61</td>
<td>39</td>
</tr>
<tr>
<td>Dictionary</td>
<td>104</td>
<td>67</td>
<td>33</td>
</tr>
</tbody>
</table>

An analysis of the data (chi-square test) indicated that the small differences between the two groups were no more than might be expected by chance alone. It was concluded therefore that arrangement had no effect on known-item searching.

During the data collection process it was observed that a number of factors could be considered as the possible causes for failure or partial success. The three major reasons were (1) the use of incorrect search terms; (2) difficulty with filing rules; and (3) the inability of the patron to distinguish subject entries from non-subject entries. In addition, a number of participants also were affected by small peculiarities in the catalog (common to both schools) or other small problems particular to the individual.

The use of incorrect search terms. The largest single cause associated with complete failure in locating appropriate cards for any request was the selection of incorrect search terms. In an attempt to minimize this difficulty, the questions submitted to the students were in terms that appeared in the catalog. In some cases, these were unused terms for which a cross-reference was available. Nevertheless, of the 1,152 searches included in this analysis, 334 (29 per cent) were conducted using the wrong term or terms.

For most questions, the headings selected were more general than the request itself. For example, material about (rather than by) the Amateur Athletic Union of the U.S. was sought under the
more general heading "athletics" rather than the specific name of the organization. This approach was commonly used for other corporate headings. The only type of search that did not seem to pose a problem concerned requests for cards about individuals. Difficulty in selecting the correct search term for topical subjects varied with the nature of the heading. Fewer students had difficulty finding straightforward headings such as "Statistical Design," for example, than phrases such as "Chemistry as a profession." For the latter question, most participants searched under "Chemistry—Profession" and "Profession—Chemistry."

**Difficulty with filing rules.** Responses to two of the nine questions revealed that success was affected by various complexities of the filing rules used in library catalogs. It was anticipated that searches for which the appropriate entry is a subordinate governmental agency might be affected by the differences in filing rules at the two schools. To test the effect of filing, the two questions that were directly affected were analyzed. The problems, as presented to the students, were stated as follows:

Locate the appropriate catalog cards that indicate the library contains material about (rather than by): the U.S. Civil Service Commission.

Locate the appropriate catalog cards that indicate the library contains material about (rather than by): The Great Britain Board of Trade.

The analysis was based on an examination of the procedure followed at the two catalogs. Frequencies for those who chose the correct search term were tabulated. The category "found" includes all students who located the term even if the student made some subsequent error in selection of cards. The results of this analysis are summarized for the two questions in Tables 3 and 4.

The calculated value of chi-square for the measures given in Table 3 is 21.72, which is significant at the .05 level for one degree of freedom. The result indicates that there was a significant difference in the performance of the students depending on the catalog (and the particular rule for filing).

The calculated value for the measures given in Table 4 is 1.02 however, which is not significant at the .05 level. This would indicate that the performance of the two groups was virtually identical and not affected by the filing differences. The conflicting results raise the question whether the filing rules actually affected the searches or whether other factors were present. It seems plausible to speculate that students with previous experience have become conditioned to the apparent difficulty of using the "U.S." files, but do not carry over their experience when using headings for other countries. This explanation, however, does not account for the differences between schools. Since there was a possibility that this single question concerning the U.S. Civil Service Commission might have biased the results, the question was deleted from the calculated mean for each student. The resulting comparison of matched pairs for
eight searches also supported the original conclusion that there was no difference in the results for subject searches between the users of the two catalogs.

Other problems. A number of problems varied from question to question and from individual to individual. These were relatively few in number—such as searching under "amateur"—and did not affect the overall comparison. One particular problem involving the use of a "see" reference, however, brought to light interesting factors. The question directed searchers to the heading "Statistical Design" where a cross-reference to the used term "Experimental Design" was found. This "see" reference was interpreted as having the same meaning as a "see also" reference by twenty-four (24.4 per cent) users of the dictionary catalog and by two (4 per cent) of the divided catalog users. A number of the dictionary catalog users indicated that the two title added entries appearing after the cross-reference were the only appropriate references and preferred to consider any entries under "Experimental Design" (which were not searched) as a last alternative. The two divided catalog users simply decided that nothing on the subject was available.

Perhaps more informative was the procedure of many of the students who searched the complete "Experimental Design" file but indicated, as pertinent, only those cards that had the term "statistics" in the title. During the post-test interview these students indicated that normally they would undertake such a search if the two title entries under "Statistical Design" had not proven useful. There was little question that these twenty-six students (at both schools) did not consider the two terms as synonymous but rather as a reference from a specific term to a more general, inclusive term.

Inability to distinguish between subject and non-subject entries. The major hypothesis of this study was directly concerned with this category of difficulty. The fact that 23 per cent of the students had difficulty in distinguishing between the two types of entries makes this confusion the second largest contributor to failure or partial success in making subject searches. For the dictionary catalog searchers, this problem was primarily one of selecting a variety of non-subject added entries as being subject headings. The fact that such entries were not typed in red did not seem to matter.

For the divided catalog user, the results were even more enlightening. Of the four hundred searches tabulated for this analysis, ninety-one (22.75 per cent) used the author-title catalog for subject searches. Since the frequency of such searches varied with the question, it became evident during the study that the major factor was simply an accident of location. As the student considered the individual question, he would walk through the main catalog section and search for the appropriate alphabetical sequence. Whether this sequence was part of the subject section or the author-title section did not seem to make any difference. Nor did the students note that the two sections were clearly marked and that different colors were used for the drawer labels to distinguish the sections. Interestingly enough, all of these students had indicated that they had used this catalog at least once within the past semester. It is difficult to imagine what else the library staff could have done to make the division more explicit.

Conclusions

Every study has inherent limits—both conceptual and practical—that define the degree of generalization that is possible. In the interest of maintaining maximum control over the various elements of catalog searches, the choice of participants, catalogs, and questions was highly structured.
Effective use of the catalog was measured in terms of a mean success score for subject searches. This score represented the ability of students to select appropriate subject references in response to a series of questions. The experimentally derived data were tested for significance and found not to be different. It was concluded that dividing the catalog was not a satisfactory device for making subject searches more effective.

The analysis of difficulties students had in coping with various questions was undertaken to determine if such difficulties were associated with arrangement. The results of that analysis indicated that for any potential benefits attributable to the divided catalog (i.e., a larger percentage of successful searches for one or more questions), there were corresponding disadvantages (in terms of lower rates of success for other questions). Furthermore, the per cent of failures attributed to the inability of patrons to distinguish subject headings from non-subject entries was almost as great for the users of the divided catalog (22.8 per cent) as for the users of the dictionary catalog (23.4 per cent). It was concluded therefore that for the two groups in general, the divided catalog did not facilitate subject searches more than the dictionary catalog.

The effect of arrangement on known-item searches was also investigated. Students were asked to determine if their particular library contained two specific documents. An analysis of the responses indicated that the rate of success in obtaining the call number for the two documents was not related to the differences in arrangement of the two catalogs.

In summary, the results of this study indicated that for a series of questions representing different levels of difficulty, a change in catalog arrangement would not materially assist college undergraduates in finding subject references. Neither arrangement proved to be substantially superior. The academic librarian choosing between a divided catalog or a dictionary catalog can base his decision on cost of production and maintenance with reasonable confidence that either arrangement is equally effective for undergraduates making subject searches.
This survey shows that Pusan College students have developed commendable reading habits in the relatively few years since their country began to move toward modernity. They spend a good portion of their free time reading; they read many books high in literary and social content, and they show a genuine interest in books by foreign authors. Their criticisms regarding the mediocrity of the Korean publishing industry and the restrictive practices of most of their libraries are a testimony to the fact that they have begun to look upon books as essential to their personal and national development.

This study deals with the book reading habits of college students in Pusan, Korea. It seeks to learn why these students read books, where they get them, the kind of books they read, and the special situations in their country which either discourage or impede the practice of good book reading habits.

The data on which this report is based were gathered during Korean Book Reading Week in September 1967. Six hundred students, representing each of five junior and three four-year colleges in the Pusan area were interviewed. Respondents were selected at the various campuses on the basis of their availability with no attempt at systematic sampling. Of the six hundred students approached, fifteen refused to be interviewed because they were afraid the interview would make them late for class. Twenty-five questionnaires were discarded because they were incomplete.

Findings
Reading Habits

According to survey results, most Korean students in Pusan (80 per cent) read books for self-improvement. A minority (13 per cent) read for entertainment, and 7 per cent do so to supplement college courses.

A substantial majority (73 per cent) read one to two books a month. Of those who read more, 17 per cent report reading between two and five books monthly, 4 per cent read more than five, and about 6 per cent read fewer than one book a month.

For a majority of the students (65 per cent) most of the reading takes place in their respective homes. Of the remaining respondents 25 per cent said they read “anywhere,” 8 per cent read in li-
Reading Among College Students in Pusan, Korea

braries, and 2 per cent in the crowded buses or streetcars.

Although only 8 per cent of all respondents said they do most of their reading in libraries, 58 per cent said they do some of their reading there. Among the students who do some of their reading in libraries, 33 per cent use only their own school library, 14 per cent use their own school library and the public library, 8 per cent use their own school library and the USIS library in Pusan, and 3 per cent use their own school library and the libraries of other schools.

Less than half (41 per cent) of the occasional library users said they go to the library once or twice a month, while a slightly larger percentage (43 per cent) said they attend more frequently. Sixteen per cent did not answer the question.

Sources of Books

The chief sources of books, mentioned by 48 per cent of all respondents, were the various libraries available to the student.2 This was followed by 39 per cent who said they buy their books from bookstores, 34 per cent said they borrow them from their friends, and 10 per cent said their chief source of books were the small personal libraries they maintain in their own homes. Two per cent mentioned book gifts they receive from friends and relatives.

Of the 219 respondents who said they get their books through bookstores 78 per cent said they usually buy two books a month,2 while 9 per cent buy fewer, and 13 per cent buy more. Furthermore, of the student book buyers about one-third (39 per cent) spend between 20 and 50 per cent of their monthly allowance on books,3 while 37 per cent spend less and 21 per cent spend more. Three per cent of the respondents did not answer the question.

Almost all respondents (94 per cent) said they maintained their own personal library. Seventy-five per cent of these book owners said their personal library consisted of about one hundred books, 10 per cent between one hundred and two hundred books, and 10 per cent reported owning more than two hundred books. Regarding content 59 per cent said most of their books dealt with cultural subjects, 13 per cent said most of their books were academic books, 12 per cent described the bulk of their personal books as “books in line with my major interest,” 6 per cent said their books were mostly amusement books, and 10 per cent gave no answer.

Kind of Books Read

Approximately 427 respondents reported they were currently reading a total of 243 separate titles including thirteen magazines. Of these 243 titles 45 per cent were fiction and 55 per cent nonfiction. Forty-four per cent of the titles were written by Koreans, and 56 per cent by non-Koreans (Table 1).

Of the 111 fiction titles, Koreans authored only 16 per cent; of the remainder, Americans authored 37 per cent; French, British, and Russian writers authored 7 per cent each; Japanese writers authored 5 per cent; and German authors produced 3 per cent. Sixteen per cent were either anthologies or short stories written by a variety of foreign authors, or foreign books whose national

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1 This figure is not in contradiction with the 58 per cent who said they use the library some of the time, for many of the latter go to the library for purposes other than reading. Thus, when students were asked: “For what reason do you go to the library?” 41 per cent said they go for amusement, 26 per cent for culture, 18 per cent to study, and 10 per cent for other purposes. Five per cent did not answer.

2 The average cost of a book is 500 won (about $1.75).

3 The average monthly student allowance is 2,500 won, or approximately $8.00.
authorship could not be determined from the data (Table 2).

Of the 132 nonfiction titles, Koreans authored 67 per cent and foreign writers 33 per cent. More than half (52 per cent) of the Korean nonfiction titles were "essays," small volumes consisting of popular commentaries on aesthetic, moral, and educational subjects, and written primarily by women writers.

Among the remaining Korean authored nonfiction titles, 8 per cent were in the field of social science, 2 per cent were biographies, 1 per cent philology, and 36 per cent other categories including magazines, anthologies, and books whose Korean authorship was unknown.

Of the forty-four foreign nonfiction books which the students were reading, twenty titles dealing primarily with social science were written by Americans; eight, consisting of biographies, philosophy, and social science, were written by Frenchmen; and six titles, of which five were in philosophy and one was a biography, were written by Germans. Of the remainder, three titles were by Englishmen, two by Scandinavian writers, and five were collections of biographies by various foreign writers.

Near the end of the questionnaire respondents were asked to name their favorite author. One hundred and forty-five writers were mentioned. Most popular of all was the American novelist, Pearl Buck, with 132 mentions (Table 3). Next was Park Kyong-Ni, Korean female essay writer, with 117 mentions (Table 4). In third and fourth places were the American novelist, Ernest Hemingway with sixty-five votes, and Yi Kwang-Soo, male Korean novelist, with sixty-four (Table 4). The favorite non-American foreign author was the Russian novelist, Tolstoy (Table 5).

By nationalities, 55 per cent of all authors mentioned were Korean. Of the remainder, 13 per cent were American, 9 per cent were French, 8 per cent British, 4 per cent Russian, 4 per cent German, 1 per cent Japanese, and 6 per cent represented various other foreign countries.

### Table 1

<table>
<thead>
<tr>
<th>Content</th>
<th>Korean</th>
<th>U.S.</th>
<th>Foreign Authors</th>
<th>Anthologies &amp; Unknown</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>Fiction</td>
<td>18</td>
<td>41</td>
<td>34</td>
<td>18</td>
<td>111</td>
</tr>
<tr>
<td>Non-Fiction</td>
<td>46</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>48</td>
</tr>
<tr>
<td>Essay</td>
<td>46</td>
<td>0</td>
<td>2</td>
<td>0</td>
<td>48</td>
</tr>
<tr>
<td>Social Science</td>
<td>7</td>
<td>13</td>
<td>4</td>
<td>0</td>
<td>24</td>
</tr>
<tr>
<td>Philology</td>
<td>1</td>
<td>3</td>
<td>6</td>
<td>2</td>
<td>12</td>
</tr>
<tr>
<td>Biography</td>
<td>2</td>
<td>2</td>
<td>6</td>
<td>0</td>
<td>10</td>
</tr>
<tr>
<td>Other</td>
<td>32</td>
<td>0</td>
<td>2</td>
<td>4</td>
<td>38</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>106</td>
<td>59</td>
<td>54</td>
<td>24</td>
<td>243</td>
</tr>
</tbody>
</table>

### Table 2

<table>
<thead>
<tr>
<th>Foreign Nations</th>
<th>Fiction</th>
<th>Nonfiction</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>United States</td>
<td>41</td>
<td>18</td>
<td>59</td>
</tr>
<tr>
<td>Germany</td>
<td>4</td>
<td>8</td>
<td>12</td>
</tr>
<tr>
<td>France</td>
<td>8</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>Great Britain</td>
<td>8</td>
<td>3</td>
<td>11</td>
</tr>
<tr>
<td>USSR</td>
<td>8</td>
<td>1</td>
<td>9</td>
</tr>
<tr>
<td>Japan</td>
<td>6</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Anthologies</td>
<td>11</td>
<td>6</td>
<td>17</td>
</tr>
<tr>
<td>Unknown</td>
<td>7</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>93</td>
<td>44</td>
<td>137</td>
</tr>
</tbody>
</table>
TABLE 3

**TEN MOST POPULAR AMERICAN AUTHORS**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Respondents</th>
<th>Authors</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pearl Buck</td>
<td>132</td>
<td>J. Kennedy</td>
<td>2</td>
</tr>
<tr>
<td>E. Hemingway</td>
<td>65</td>
<td>W. Faulkner</td>
<td>2</td>
</tr>
<tr>
<td>M. Mitchell</td>
<td>24</td>
<td>K. Mansfield</td>
<td>2</td>
</tr>
<tr>
<td>J. Steinbeck</td>
<td>20</td>
<td>B. Russell</td>
<td>2</td>
</tr>
<tr>
<td>O. Henry</td>
<td>6</td>
<td>H. Keller</td>
<td>2</td>
</tr>
</tbody>
</table>

*A total of 19 American authors were mentioned by 265 respondents who answered the question: “Who is your favorite author?”

TABLE 4

**TEN MOST POPULAR KOREAN WRITERS BY SEX AND BOOK CONTENT**

<table>
<thead>
<tr>
<th>Author</th>
<th>Sex</th>
<th>Type</th>
<th>Mentions</th>
</tr>
</thead>
<tbody>
<tr>
<td>Park Kyong-Ni</td>
<td>Female</td>
<td>Essay</td>
<td>117</td>
</tr>
<tr>
<td>Yi Kwang-Soo</td>
<td>Male</td>
<td>Fiction</td>
<td>64</td>
</tr>
<tr>
<td>Mo Yoon-Suk</td>
<td>Female</td>
<td>Essay</td>
<td>44</td>
</tr>
<tr>
<td>Yi Ok-Nyong</td>
<td>Male</td>
<td>Essay</td>
<td>39</td>
</tr>
<tr>
<td>Kim Hyong-Suk</td>
<td>Male</td>
<td>Essay</td>
<td>33</td>
</tr>
<tr>
<td>Choi Jung-Hi</td>
<td>Female</td>
<td>Essay</td>
<td>22</td>
</tr>
<tr>
<td>Yong Bi-Suk</td>
<td>Male</td>
<td>Fiction</td>
<td>26</td>
</tr>
<tr>
<td>Kang Shim-Jae</td>
<td>Female</td>
<td>Essay</td>
<td>18</td>
</tr>
<tr>
<td>Bank Jong-Hwa</td>
<td>Male</td>
<td>Fiction</td>
<td>15</td>
</tr>
<tr>
<td>Park Hwa-Song</td>
<td>Female</td>
<td>Fiction</td>
<td>14</td>
</tr>
</tbody>
</table>

*Names suggested by answers to question: “Who are your favorite Korean authors?” Complete tally showed; 348 respondents mentioned 52 male writers; and 272 respondents mentioned 28 female writers.

TABLE 5

**TEN MOST POPULAR NON-AMERICAN AND NON-KOREAN AUTHORS**

<table>
<thead>
<tr>
<th>Authors</th>
<th>Respondents</th>
<th>Authors</th>
<th>Respondents</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tolstoi</td>
<td>35</td>
<td>J.-P. Sartre</td>
<td>11</td>
</tr>
<tr>
<td>Dostoevski</td>
<td>26</td>
<td>Goethe</td>
<td>8</td>
</tr>
<tr>
<td>S. Maugham</td>
<td>14</td>
<td>S. Sagin</td>
<td>8</td>
</tr>
<tr>
<td>A. Gide</td>
<td>11</td>
<td>Mira Mizko</td>
<td>6</td>
</tr>
<tr>
<td>deMaupassant</td>
<td>11</td>
<td>A. Carus</td>
<td>5</td>
</tr>
</tbody>
</table>

*A total of 46 non-American foreign authors were mentioned by 71 respondents in answer to the question: “Who are your favorite authors?”

**Student Suggestions**

One hundred and sixty-nine of the 560 respondents made suggestions for improving book publishing in Korea. The suggestion made most frequently (53 per cent) was that the publishers should present books with better content. Other suggestions included the recommendation that books contain fewer typographical errors (22 per cent), that foreign books should be better translated (16 per cent), and miscellaneous suggestions (9 per cent) (Table 6).
TABLE 6

<table>
<thead>
<tr>
<th>Suggestion</th>
<th>Frequency</th>
<th>Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Publish books with better content</td>
<td>53</td>
<td>100%</td>
</tr>
<tr>
<td>Fewer typographical errors</td>
<td>22</td>
<td></td>
</tr>
<tr>
<td>Better translations</td>
<td>16</td>
<td></td>
</tr>
<tr>
<td>Better constructed books</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>Fewer Japanese books</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>Footnotes for difficult words</td>
<td>1</td>
<td></td>
</tr>
<tr>
<td>Other suggestions</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

One hundred and ninety-four respondents answered the question: "What suggestions do you have for improving the libraries in Korea?" The four suggestions most frequently offered were "Make libraries more pleasant and comfortable" (35 per cent), "Increase the number of books in the libraries" (27 per cent), "Permit books to circulate" (20 per cent), and "Arrange books on open shelves" (12 per cent) (Table 7).

DISCUSSION

The findings of this study show that the college students interviewed in Pusan have a healthy interest in books. They spend a good portion of their free time reading, they read many books high in literary and social content, and they show a commendable interest in books by foreign authors.

What is surprising about this healthy student interest in books is that it is largely self-generated, that it has developed with little or no support from the very institutions which are, or should be, interested in book reading: universities, book publishers, bookstores, and libraries. The remainder of this paper, therefore, will deal with the failure of these institutions adequately to support book reading among college students.

Book Reading in Colleges

The first of these weaknesses, located in the colleges themselves, is the general failure of professors, as reported by many of the respondents, to emphasize
the importance of books in the learning process. By pointing out this failure the author is not suggesting that Korean colleges and universities adopt *in toto* Mortimer Adler's dependence upon *The Great Books* as the chief materials of education. It appears rather that teachers should recognize that new knowledge emerges from old and that the repository of old knowledge is books. If this fact were more widely accepted, there would be fewer college courses based entirely upon classroom notes taken by the professor when he was a student, and wider use of outside readings, a practice which is largely ignored.

**Korean Book Publishers**

A second weakness can be attributed to the Korean publishers for their failure to provide the kinds of books which might contribute more fully to student development. This criticism was voiced, not only by the students, as shown in the findings, but by others as well. Thus, in a survey of book publishing in Korea, reported by Dae Ke-min in the *Korean Herald*, of April 20, 1967, it was disclosed that of the total books published in 1966, 61 per cent were comic books, 20 per cent were "ponies" (book aids for passing school examinations), and only 19 per cent, "regular" books. In other words less than 20 per cent of all the books published in 1966 could be considered suitable and useful for the future leaders of the country.

It is quite true that comic books and "ponies" are money-makers, but publishers should have a higher motivation than the mere making of money. They are not mere merchants; they are both guardians of their country's culture and copilots in their country's drive toward progress. Publishers could contribute greatly to this drive by bringing out the kind of books students want and need.

Publishers might well respond that such a program requires money they do not have. Assuredly one cannot expect a publisher, or anybody else for that matter, to contribute to his society at the expense of his own existence. But the problem is not insurmountable. Production processes can be made more economical, subsidies might be sought from the government, or costs might be cut by the universally accepted technique of improving sales. By the use of these approaches—or others—it should be possible for publishers to turn out better books and make a reasonable profit at the same time.

**Bookstores**

A third demerit might be meted out to the Korean bookstores for their failure to serve more adequately the book reading interests of students. To begin with, few of the twenty or so which exist in Pusan—not counting about fifty or more small book stalls—are larger than a medium-sized living room, or have as many as one thousand books on their shelves. Furthermore, the stock of most of the bookstores is arranged neither by subject matter nor by author, but by the order—or disorder—in which they arrived from the publisher. Finally, few if any of the bookstores utilize lists, displays, or, most important of all, book salesmen who know something about the books they are offering for sale. All this adds up to a mediocrity of operation which not only limits profits, but also serves to discourage bookstore use by students.

**Korean Library System**

A concluding series of criticisms can be made of the Korean library system. One of these, pointed out by the students themselves, is the meagerness of library book collections, estimated by reliable observers to average only 25,000 volumes for each college library in Ko-
Almost all Korean librarians answer this complaint by pleading poverty. "The library," they say, "would buy more books if it had more money." Although this defense is partially true, it is also true that college authorities are insufficiently aware of the indispensability of books in a modern educational institution, and that if they were, they could seek more vigorously—and get—additional funds.

Students also criticized their college libraries for failure to provide suitable facilities for reading. The allegation is true. What the visitor sees when he enters the average library are bare walls, uncovered windows, a scattering of crude benches and desks, and, in the wintertime, freezing temperatures, because none of the Korean libraries are heated. Korean college students, like Koreans in general, are hardy people and quite accustomed to a hard life. But a student's ability to tolerate discomfort should not blind the library authorities to the need to provide facilities which are at least basically comfortable and attractive.

Students also complain that they are not permitted to take books out of the library. Librarians say that the reason for prohibiting book circulation—except to professors and special students—is that the practice would strongly limit the use of the library books, for if a book is in circulation, it is not available for use in the library. The reasoning is spurious. Every library has a large number of books for which there is only occasional demand. These books could certainly be permitted to circulate with hardship to none. The books for which there is a strong demand present a different problem. But even these books could circulate overnight and during weekends, when students cannot read them in the library anyway. The point which many Korean librarians fail to realize is that books are to be used, and if this is not possible, or if it is made difficult, then there is little excuse for the existence of the book.

The argument offered by librarians to support their practice of keeping their books locked up, a final student complaint, is that this method prevents stealing. This is a highly exaggerated fear. Few books are likely to be stolen if common-sense precautions are taken. Some of these which have proved effective in other libraries include a clearly stamped indication of library ownership, a single passageway for those entering or leaving the library, and a requirement that patrons check briefcases and overcoats before entering the library. If none of these methods work, of course, Korean librarians might well accept the point of view of other progressive librarians all over the world, namely, that books are expendable. If the loss by theft is minimal, it should be accepted as one of the normal costs of library operation.

CONCLUSION

This study has shown that college students in Pusan have a healthy interest in books. They appear to realize that they have much ground to make up in modernizing their nation, and that books, more than anything else, would help enable them to do so. The study has also shown that the exercise of this healthy book reading interest is being held back by basic shortcomings of the very institutions responsible for student education through book reading. In the interest both of the college students and of Korea as a nation, one can hope that these shortcomings will be overcome. For, in the movement from traditionalism to modernity, there is nothing more important than books.

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5 Also pointed out by competent observers is the fact that approximately half of each college collection consists of old books donated by interested foreigners, especially Americans.
Opinions of Library Science PhD’s About Requirements for the PhD Degree in Library Science

Opinions were sought from all holders of PhD degrees in library science concerning the most desirable elements of the doctoral programs in the library schools. Ninety-six PhD’s responded. Their replies on such matters as entrance requirements, course requirements and content, language requirements, examination practices, and dissertation topics are tabulated and presented.

All members of the American Library Association holding PhD degrees in library science were polled recently on certain facets of the requirements for this degree. Ninety-six anonymous responses were received from 151 questionnaires mailed. Thirty-five of these respondents held their PhD degrees from the University of Chicago; twenty were from Illinois; thirty-two were from Michigan; seven were from Rutgers. One each were from Case Western Reserve and Wisconsin. The latter two were eliminated for ease of tabulation.

The “30s, 40s,” etc., in the following tables refer to the decade in which the respondent received his PhD degree. “Ed” in the tables means that he is engaged primarily in library education; “Ad” means that he is primarily a library administrator; and “Ret” indicates that he is retired. Forty-five of the respondents were engaged primarily in library education; forty-six were administrators; and three were retired. The following is a summary of these responses.

ADMISSIONS

The first question had to do with the minimal degree requirements for admission to the PhD program. Sixty-eight per cent of the respondents thought that this should be the master’s degree from an accredited library school. In responses to this question, as in many others, however, many suggested that flexibility be exercised. For example, several suggested that a person with a degree in mathematics or engineering be admitted to the PhD program without any library education. Another person suggested that the requirement for a library degree be waived for a person with significant professional library experience. The responses to this question are shown in Table I.

The second question had to do with the minimal grade point average required for admission. Forty-three per cent of the respondents thought that a
TABLE 1
MINIMAL DEGREE REQUIREMENTS FOR ADMISSION

<table>
<thead>
<tr>
<th></th>
<th>Chicago 30s</th>
<th>Chicago 40s</th>
<th>Illinois 30s</th>
<th>Illinois 40s</th>
<th>Michigan 30s</th>
<th>Michigan 40s</th>
<th>Rutgers 30s</th>
<th>Rutgers 40s</th>
<th>Total</th>
</tr>
</thead>
<tbody>
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<td>Degree</td>
<td>Ed</td>
<td>Ad</td>
<td>Ed</td>
<td>Ad</td>
<td>Ed</td>
<td>Ad</td>
<td>Ed</td>
<td>Ad</td>
<td></td>
</tr>
<tr>
<td>None</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>5</td>
</tr>
<tr>
<td>Bachelor's degree</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>3</td>
</tr>
<tr>
<td>BLS from an unaccredited or accredited library school</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>7</td>
</tr>
<tr>
<td>BLS from an accredited library school</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Master's degree in any field</td>
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<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>7</td>
</tr>
<tr>
<td>Master's degree from an unaccredited or accredited library school</td>
<td>1</td>
<td>1</td>
<td>4</td>
<td></td>
<td>1</td>
<td>1</td>
<td>2</td>
<td></td>
<td>10</td>
</tr>
<tr>
<td>Master's degree from an accredited library school</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>2</td>
<td>1</td>
<td>2</td>
<td>46</td>
</tr>
<tr>
<td>Master's degree from an accredited lib. school plus a subject master's</td>
<td>1</td>
<td></td>
<td>2</td>
<td>2</td>
<td>5</td>
<td>3</td>
<td></td>
<td></td>
<td>13</td>
</tr>
<tr>
<td>BLS or a PhD in a subject field</td>
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<td></td>
<td>1</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
</tbody>
</table>

TABLE 2
MINIMAL GRADUATE GRADE POINT AVERAGE REQUIREMENTS FOR ADMISSION

|                    | Chicago 30s | Chicago 40s | Illinois 30s | Illinois 40s | Michigan 30s | Michigan 40s | Rutgers 30s | Rutgers 40s |
|--------------------|-------------|-------------|--------------|--------------|--------------|--------------|-------------|-------------|-------|
| Grade              | Ed          | Ad          | Ed           | Ad           | Ed           | Ad           | Ed          | Ad          |       |
| None               | 1           | 1           | 1            | 1            | 1            | 1            | 1           | 1           | 7     |
| B                  | 1           | 1           | 1            | 2            | 6            | 1            | 2           | 2           | 40    |
| B+                 | 1           | 1           | 1            | 5            | 5            | 1            | 1           | 3           | 35    |
| Midway between B+ and A- | 1 |   | | | | | | | 1 |
| A-                 | 1           | 1           | 1            | 1            | 1            | 1            | 2           | 1           | 11    |

B grade was sufficient, while 37 per cent favored a B+. Six per cent agreed with the person who wrote pungently, "Forget the damned grades." In this connection, it is interesting to note that administrators were willing to admit people with lower grade point averages than were educators. Several respondents felt that the institution from which the degree was earned was important as well as the grade point average. The responses to this question are reported in Table 2.

The next question on admissions was concerned with which examinations should be required for evaluating a student's suitability for the PhD program. Forty-nine per cent thought that the Graduate Record Examination should be required, while 24 per cent favored both the Graduate Record Examination and the Miller Analogies Test. In other words 73 per cent favored at least the Graduate Record Examination. The responses to this question are noted in Table 3.

On the issue of the number of years...
Requirements for PhD Degree in Library Science / 527

TABLE 3
EXAMINATION REQUIREMENTS FOR EVALUATING STUDENTS’ SUITABILITY FOR ADMISSION

<table>
<thead>
<tr>
<th>Chicago</th>
<th>Illinois</th>
<th>Michigan</th>
<th>Rutgers</th>
</tr>
</thead>
<tbody>
<tr>
<td>30s</td>
<td>40s</td>
<td>50s</td>
<td>60s</td>
</tr>
<tr>
<td>Ed</td>
<td>Ad</td>
<td>Ret</td>
<td>Ed</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>None</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Graduate Record Examination and Miller Analogies Test</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Graduate Record Examination</td>
<td>4</td>
<td>5</td>
<td>4</td>
</tr>
<tr>
<td>Miller Analogies Test</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>No response</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
</tbody>
</table>

TABLE 4
PROFESSIONAL LIBRARY EXPERIENCE REQUIREMENTS FOR ADMISSION

<table>
<thead>
<tr>
<th>Chicago</th>
<th>Illinois</th>
<th>Michigan</th>
<th>Rutgers</th>
</tr>
</thead>
<tbody>
<tr>
<td>30s</td>
<td>40s</td>
<td>50s</td>
<td>60s</td>
</tr>
<tr>
<td>Ed</td>
<td>Ad</td>
<td>Ret</td>
<td>Ed</td>
</tr>
<tr>
<td>---</td>
<td>---</td>
<td>---</td>
<td>---</td>
</tr>
<tr>
<td>None</td>
<td>2</td>
<td>3</td>
<td>2</td>
</tr>
<tr>
<td>One year</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Two years</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Three years</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Four years</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
<tr>
<td>Five years</td>
<td>1</td>
<td>1</td>
<td>2</td>
</tr>
</tbody>
</table>

of professional library experience which should be required for admission, there was considerable difference of opinion. Forty per cent thought that no experience should be required, while the balance would require at least one year. Some thought that the variety and the quality of the experience should be evaluated. Others believed that related experience, such as teaching in college, should be counted in lieu of library experience. The results on the question about experience are noted in Table 4.

COURSES

The next section of the questionnaire dealt with the amount of course work required in a doctoral program. Although 26 per cent thought that there should be no required minimum, most of the people who responded did not think this much flexibility was desirable. Sixty-two per cent thought that the course work should total at least twenty hours. The responses to this question are reported in Table 5.

In one of the stronger expressions of opinion, 71 per cent indicated that the courses taken in the library school by PhD students should cover the whole field of librarianship. Only 26 per cent thought that they should be restricted to the student’s area of specialization. One respondent wrote that the program should center on creative effort through individual research, not on classroom in-
TABLE 5
MINIMAL NUMBER OF SEMESTER HOURS OF COURSE WORK IN LIBRARY
SCIENCE BEYOND THE FIFTH YEAR DEGREE IN LIBRARY SCIENCE

<table>
<thead>
<tr>
<th>Chicago</th>
<th>Illinois</th>
<th>Michigan</th>
<th>Rutgers</th>
</tr>
</thead>
<tbody>
<tr>
<td>30s</td>
<td>40s</td>
<td>50s</td>
<td>60s</td>
</tr>
<tr>
<td>Ed</td>
<td>Ad</td>
<td>Ret</td>
<td>Ed</td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
<td>----------</td>
<td>---------</td>
</tr>
<tr>
<td>No minimum</td>
<td>2</td>
<td>2</td>
<td>3</td>
</tr>
<tr>
<td>0-19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>20-29</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>30-39</td>
<td>2</td>
<td>4</td>
<td>1</td>
</tr>
<tr>
<td>40-49</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>50-59</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>60-69</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>2</td>
<td></td>
</tr>
</tbody>
</table>

TABLE 6
CONTENT OF THE COURSES TAKEN IN THE LIBRARY SCHOOL

<table>
<thead>
<tr>
<th>Chicago</th>
<th>Illinois</th>
<th>Michigan</th>
<th>Rutgers</th>
</tr>
</thead>
<tbody>
<tr>
<td>30s</td>
<td>40s</td>
<td>50s</td>
<td>60s</td>
</tr>
<tr>
<td>Ed</td>
<td>Ad</td>
<td>Ret</td>
<td>Ed</td>
</tr>
<tr>
<td>---------</td>
<td>----------</td>
<td>----------</td>
<td>---------</td>
</tr>
<tr>
<td>The whole field of librarianship</td>
<td>1</td>
<td>1</td>
<td>3</td>
</tr>
<tr>
<td>Only courses in the students' areas of specialization</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>No response</td>
<td>1</td>
<td>1</td>
<td></td>
</tr>
</tbody>
</table>

struction. The responses to the question on the content of the courses are summarized in Table 6.

Most of the respondents favored the use of several seminars among these courses. One person, for example, wrote that a methodologically oriented seminar might well be the backbone of a quality program. Another suggested that these seminars should force the student to speak, write, and defend in competition with his peers and under the tough leadership of a faculty member. Sixty-eight per cent thought that the percentage should be at least 30. The responses to this question on seminars are summarized in Table 7.

On the related question of foreign languages, 58 per cent thought that two should be required, while 25 per cent favored one. Some thought that a collateral field—statistical methods or computer programming—could be substituted for one of these languages. A few of these respondents thought that competence in one language is preferable to a reading knowledge of two. Others would require only those languages which are needed in the student's research. The responses on the number of foreign languages to be required are reported in Table 8.

PRELIMINARY EXAMINATIONS

As to the form of the preliminary examinations, 72 per cent thought that
they should include both written and oral questions, while 22 per cent thought that all of them should be written. Only 2 per cent thought that all the examinations should be oral. In this connection, one person volunteered the suggestion that the oral examination should include matters which had been covered on the written examinations but which the faculty felt needed to be clarified or elaborated upon and that it should also include technical matters concerning the dissertation. Another person suggested that an oral examination helps to reveal personal qualifications which would help in determining potentiality to carry a dissertation to a successful completion. Another felt that the decision as to the oral or written nature of the examinations should be based on the field of specialization. He pointed out, for example, that it may be important for an administrator to be able to question. Another person dismissed oral examinations as "horrible experiences" which favor the "glib student with a gift of gab." The responses on this matter are recorded in Table 9.

Another question related to the numbers of years which should be allowed to elapse before the preliminary examinations would need to be repeated, provided that the thesis was not finished. Fifty-seven per cent thought that this period should be five years. The responses to this question are recorded in Table 10.

Seventy per cent thought that the pre-
TABLE 9
**Form of Preliminary Examinations**

<table>
<thead>
<tr>
<th></th>
<th>Chicago</th>
<th>Illinois</th>
<th>Michigan</th>
<th>Rutgers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
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</tr>
<tr>
<td></td>
<td>50s</td>
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<tr>
<td></td>
<td>60s</td>
<td></td>
<td></td>
<td></td>
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<td></td>
<td></td>
<td></td>
<td>1</td>
</tr>
<tr>
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<td>1 3 1</td>
<td>1 3 5 4 2 1</td>
<td>21</td>
<td></td>
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</tr>
<tr>
<td>Oral</td>
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<td>1 2 5 6 3 4</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Partly written and partly oral</td>
<td>2 1 1 5 4 5 7</td>
<td>2 2 5 5 6 6 3 6 4 3 1</td>
<td>68</td>
<td></td>
<td></td>
</tr>
<tr>
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<td>1 1 1 1 1</td>
<td>1 1 1 1 1</td>
<td>1 1</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 10
**Number of Years Should Be Allowed to Elapse Before the Preliminary Examinations Would Need to Be Repeated**

<table>
<thead>
<tr>
<th></th>
<th>Chicago</th>
<th>Illinois</th>
<th>Michigan</th>
<th>Rutgers</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30s</td>
<td>40s</td>
<td>50s</td>
<td>60s</td>
<td></td>
</tr>
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<td>60s</td>
<td></td>
</tr>
<tr>
<td></td>
<td>60s</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
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<tr>
<td>4</td>
<td>1 1</td>
<td></td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>5</td>
<td>2 3 4 3 2 3 1 1 2 2 4 5 5 2 6 5 3 1 5</td>
<td>54</td>
<td></td>
<td></td>
<td></td>
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<tr>
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<td>17</td>
<td></td>
<td></td>
<td>2</td>
</tr>
<tr>
<td>Unlimited</td>
<td>1 1 1 1 1</td>
<td>1 1 1 1</td>
<td>1 1</td>
<td></td>
<td>11</td>
</tr>
<tr>
<td>No response</td>
<td>1 1 2 1</td>
<td>1 1 1 1 1</td>
<td>1 1</td>
<td></td>
<td>11</td>
</tr>
</tbody>
</table>

The preliminary examinations should cover the whole field of librarianship. Twenty-four per cent felt that the examinations should cover only the candidate's area of specialization and research methodology. Others believe that the minor fields should also be covered in the preliminary examinations, while still others think that the emphasis of the examinations should be in the area of specialization. Seventy-four per cent favored the inclusion of research methodology in the examinations. The breakdown on the replies to this question as to what the preliminary examinations should cover is reported in Table 11.

**Thesis**

In responding to the question as to the type of research appropriate for a PhD dissertation, one person wrote, "The majority of library history research isn't worth the paper it is printed on. History should be outlawed." His point of view, however, was not common among the respondents. Ninety-six per cent responded that historical research, as well as studies on contemporary problems, is appropriate. Several commented that historical, descriptive, experimental, and statistical research are all acceptable. The breakdown among the
Requirements for PhD Degree in Library Science / 531

TABLE 11
CONTENT OF THE PRELIMINARY EXAMINATIONS

<table>
<thead>
<tr>
<th></th>
<th>Chicago</th>
<th>Illinois</th>
<th>Michigan</th>
<th>Rutgers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30s</td>
<td>40s</td>
<td>50s</td>
<td>60s</td>
</tr>
<tr>
<td>Research methodology and the whole field of librarianship</td>
<td>1</td>
<td>1</td>
<td>2</td>
<td>5</td>
</tr>
<tr>
<td>The whole field of librarianship</td>
<td>1</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>The candidate’s area of specialization and research methodology</td>
<td>2</td>
<td>2</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>The candidate’s area of specialization only</td>
<td>1</td>
<td>1</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Candidate’s area of specialization and cognate field</td>
<td>1</td>
<td>1</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>No response</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

TABLE 12
CONTENT OF THESES

<table>
<thead>
<tr>
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<th>Chicago</th>
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<th>Michigan</th>
<th>Rutgers</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>30s</td>
<td>40s</td>
<td>50s</td>
<td>60s</td>
</tr>
<tr>
<td>Research on contemporary problems only</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Historical research and research on contemporary problems</td>
<td>2</td>
<td>1</td>
<td>3</td>
<td>5</td>
</tr>
</tbody>
</table>

replies to this question is given in Table 12.

Weaknesses and Strengths of the PhD Programs

A final question had to do with the weaknesses and strengths of the several PhD programs. In this connection, many thought that individualized, flexible requirements, scheduling, and instruction were high points of their study. They were appreciative of the opportunity to build their programs around their own research interests.

Another strength frequently mentioned had to do with the quality of the faculties. Several mentioned, for example, the strong faculty interest in each student and his work. One person, for example, said that his chairman made invaluable suggestions for his thesis in their fortnightly meetings and was always prompt in returning drafts of chapters.

The work in research methods was also highly appreciated. One person, for instance, mentioned that in his program he had learned to evaluate research. Another mentioned that he had developed an attitude of inquiry and had developed some ability to identify problems in need of research. Another said that he had learned much about writing from his thesis work. Participation in projects being carried out at the library school was also mentioned favorably.
The seminars in which students were free to express themselves and to criticize each other's ideas as well as existing practices in the field also received approbation. One person wrote:

Perhaps the best one can hope for in any doctoral program is thorough education in research methodology and the exchange of ideas through vigorous discussion with one's advisor and fellow doctoral students. One learns in that process that he must defend his views in an adequate and competent manner with a careful consideration of all the data.

Other attributes singled out for favorable comment were the opportunities to study in other subject areas of the graduate schools and the excellent libraries available.

The weaknesses listed were parallel to these strengths. Many respondents indicated a desire for more flexibility and opportunities for specialization. Several people also suggested that the programs be aimed more directly at the doctoral students rather than having the students take the same courses as master's degree candidates. In this connection, one person criticized the doctoral program at his school for having been developed on an expedient basis.

The faculties were also criticized for their lack of understanding of librarianship and for their lack of ability to relate to the students' research. One person, for instance, wrote:

Though I had some superb scholar-teachers, there were also those who wouldn't have known what research was if it had hit them in the face. Moreover, even the good ones left a lot to be desired when it came to their own productivity research-wise. They were more concerned with being on an ALA committee or doing some survey for public or college libraries.

Another person criticized his faculty for lack of direction in the writing of his thesis.

Many of the respondents thought that more emphasis on statistical research methodology was needed. Some also would have liked more computer skills. Others criticized their schools for failing to help them to identify current problems. The lack of seminars was also frequently mentioned. Finally, the programs were criticized for their failure to take advantage of interdisciplinary programs at the universities and for their poor physical accommodations.

On the basis of this study it would appear that formal doctoral students tend to favor programs with thorough instruction in research methods, seminars, and opportunities to study outside the library school. At the same time that they favor individualized, flexible requirements, there seems to be no consensus on certain basic requirements. Probably no one would suggest that these requirements should be uniform. The desire for flexible, individualized programs within the schools would also suggest the same type of individualized flexibility among the various programs.
The authors contrast the university catalog and the card catalog and conclude that the university catalog is the best guide to the university's current scholarly interests. They urge that librarians study and classify courses therein, such as books, using the Library of Congress or Dewey Decimal schemes so that specific class numbers are grouped by academic department and become substantial spans. The profile can be used as a selection tool, as a correlating tool between curriculum, circulation and publishing, and as a device to aid weeding and shelving. General and specific guidelines for classifying, including a method for resolving apparent duplication of courses in different departments are presented. Time and unit figures are tabulated. Specific steps in classification and editing are described.

Three earlier papers in this journal referred briefly to a device for tabulating data on books published, purchased, or circulated. This paper provides justification for the device, suggests several uses, and explains in detail how it is constructed.

Justification

Traditionally, librarians have regarded the card catalog and shelflist as the best guide to the scholarly interests of the university. The card catalog and the book collection were constructed with requests, for the most part, by faculty whose interests were usually specialized and whose tenure was not always permanent. Current book choices therefore did not always represent the fundamental current curriculum. Even now it is the assigned task of the faculty library representative to request books which reflect the teaching mission of his department. His book choices are rarely questioned, nor need they be. What might be questioned is whether all the relevant books published in a given year are actually requested. Faculty turnover and specialized interests disrupt continuity and therefore may actually prevent the library's collection from fully reflecting departmental interest and need. Useful, then, would be a record which accurately reflects current departmental in-
terests, has relative stability, and has a fairly high degree of continuity.

This paper proposes that the best such record is the university catalog, not the card catalog. The card catalog reflects the cumulative scholarly interests of the curriculum; the university catalog reflects the current, changing curriculum. Courses and whole programs are added or dropped. Whatever its shortcomings, however it changes, the university catalog is as thumbed and studied as the card catalog. Like books, courses are titled, listed and printed. What better record? Why not recognize the university catalog, then, and use it as a selection tool and guide to the collection? We could, if courses were classified by the Dewey Decimal or Library of Congress schemes, as are books in the card catalog.

The DC and LC schemes are instruments too valuable to use on books alone. Other forms of information in libraries have been classified: abstracts by the Oxford decimal classification in Forestry Abstracts and Soils and Fertilizers, and abstracts on cards in many special libraries. Indeed, information scientists have put much thought into the problems of the structure and classification of knowledge in recent years. Why not college courses then? Courses are uniquely relevant and central to the library's purpose. A list of class numbers or groups of class numbers resulting from classification of the university catalog can be regarded as a department profile and can be used in many ways. For example, by correlating the class numbers to those in the American Book Publishing Record, or the British National Bibliography, clerks could use them to preselect books for critical review and final selection by a librarian. The list of class numbers could also be used as a tool to analyze the relationship of circulated books to courses.

Study of the university catalog is one excellent way to learn about the curriculum and is an unusual exercise for catalogers. University of Southwestern Louisiana catalogers stated, after classifying 1,346 courses, that they had gained therefrom a far better understanding of the university program. It gave them a perspective they did not have before. Using both the DC and LC schemes for an unconventional application provided insights not possible otherwise.

In addition to the applications suggested above, several more are listed below. Undoubtedly there are others. In each of the following, class numbers can be grouped under each department in the catalog, creating a tabulating framework for correlation analysis, and other statistical studies.

1. **Assessing the collection.** Class numbers for existing as well as new courses and departments can be compared to the shelflist or other classified bibliographies to ascertain adequacy or lack of material.

2. **As a buying guide.** Currently published books with class numbers falling into the same groups as those in the university catalog should be first choices for purchase.

3. **MARC tapes as a selection tool.** Class numbers on the MARC tapes could be searched and compared to the list of class numbers in the university catalog. Titles of LC books with call numbers that match the class numbers would have purchasing priority. Important material outside the class number profile would be reviewed and selected by traditional methods.

4. **As a guide to the collection.** Teachers may use groups of numbers assigned to each course as a guide to relevant material in the stacks.

5. **Circulation.** The number of books circulated in each departmental category could be profitably correlated with the number of books in the existing collection.
6. In-library use. The books used in the library could be correlated with those taken out of the library.

7. Weeding device. Books with class numbers not in the listed groups can be regarded as having low relevance and if they have no other value may be considered for discard.

8. As a shelving and storage aid. Books in the highly relevant categories can be shelved in optimum locations. Those not in relevant categories can be stored in less accessible places.

So much for the argument. The following discussion is intended for those who may be interested in applying the device to their own situation.

The Classification Process

The first step in the classification process is to assign numbers to individual courses in the same manner that numbers are assigned to books. There is no need, however, to restrict classification to one number. If more than one number applies, each may be listed. At the University of Southwestern Louisiana nearly two numbers per course were assigned and entered in the margin next to the descriptions in the catalog. A 3"x 5" card was then prepared for each number assigned, including, in addition to the number, the department and course number. Editing then reduced the number of class numbers considerably, as can be seen in Table 1. Each cataloger reviewed specific numbers assigned to each department, and found that (1) many class numbers were repeated from course to course and (2) a long list of specific class numbers had accumulated with very few gaps between. The editing process simply consisted of (1) dropping all but one each of the many repeated numbers while listing on one 3"x 5" card all the courses having that one number, and (2) listing on another 3"x 5" card the first and last of the long list of class numbers, it being agreed that all of the numbers in between were included. Long, inclusive spans were thus created. For example: QA 303–320 was given to calculus courses; QA 331–355, to complex variables; QA 331–360, to complex analysis; QA 371–381, to differential equations. Since these courses are all in the mathematics department, the four

<table>
<thead>
<tr>
<th>TABLE 1</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Number of Departments, Courses, and Class Numbers and Time Needed to Complete Project</strong></td>
</tr>
<tr>
<td>------------------</td>
</tr>
<tr>
<td><strong>Number of departments</strong></td>
</tr>
<tr>
<td><strong>Number of courses</strong></td>
</tr>
<tr>
<td><em><em>Total classes</em> before editing</em>*</td>
</tr>
<tr>
<td><strong>LC</strong></td>
</tr>
<tr>
<td><em><em>Total classes</em> after editing</em>*</td>
</tr>
<tr>
<td><strong>LC</strong></td>
</tr>
<tr>
<td><strong>Time required to assign numbers</strong></td>
</tr>
<tr>
<td><strong>Time required to edit numbers</strong></td>
</tr>
<tr>
<td><strong>Total time</strong></td>
</tr>
<tr>
<td><strong>Total courses classified per hour</strong></td>
</tr>
<tr>
<td><strong>560 cataloger/hours</strong></td>
</tr>
<tr>
<td><strong>Time to classify and edit one course</strong></td>
</tr>
<tr>
<td><strong>2.4 courses</strong></td>
</tr>
</tbody>
</table>

* Individual numbers and spans of numbers
short spans were made one long span, QA 303–381, and labeled Mathematics. The apparently nonexistent numbers, QA 321–330 and QA 361–370 are assumed to exist for the sake of closing the span. The edited class numbers were then arranged sequentially. An example follows:

QA 135–263 Math
QA 264–265 Computer Science
QA 266 Math
QA 268 Computer Science
QA 269–699 Math (absorbing the example QA 303–381)
QA 801–820 Physics
QA 821–835 Civil Engineering

The numbers were then grouped according to department:

Computer Science:
Q 300–380
QA 74–76.8
QA 264-265
QA 268
ZZ 699-699.5

Math:
HF 5691–5716
QA 11
QA 39
QA 135–263
QA 266
QA 269–699
QC 851–999
TA 329–347

Physics:
QA 801–820

Civil Engineering:
QA 821–835

Specific Guidelines

To coordinate the work of University of Southwestern Louisiana catalogers and to establish uniformity, the authors developed the following guidelines and instructions.

1. **Single listings.** A number assigned to more than one course within the same department need only be listed once. It is useful, however, to list these courses on one card for cross-referencing.

2. **Spans.** Specific numbers should be grouped together, whenever possible, to form spans. Thus, if 574 and 574.1 are separately assigned, then they can be grouped together to form the span, 574–574.1. Additional numbers can be added to make the span even greater. In constructing a span, build up from the specific to the general.

3. **Specific numbers.** Use specific numbers whenever possible to assure that each department has its own group of numbers, while at the same time keeping the number of spans to a minimum by making them as long and as inclusive as possible. The more specific, the more accurate; but the more inclusive, the less cumbersome. (See also Guideline no. 6.)

4. **Class numbers not in schedules.** Spans may include numbers not specifically listed in the LC or DC schedules. For example, the span 184–186 may be assumed to include 185.5, even though no such number is specifically scheduled.

5. **Ending a number.** A number in a span will end with the last number for that subject listed in the LC or DC schedule. For example, biogeography ends with 574.99 rather than 574.9, because 574.9 does not include all the subjects between 574.9 and 574.99. It is not necessary to stretch the number out further, e.g., 574.99999 . . . because no such number is listed in Dewey. The last number listed for that subject is 574.99.

6. **Survey Courses.** If a survey course is offered in a department which offers specific courses in the same subject, do not assign any number. If no specific courses are offered within the
general subject of the survey course, then assign as specific a number as possible. For example, instead of QA 1–935 for a survey course in mathematics, use

QA 36 (Encyclopedic Works, Textbooks, Compendes, etc.)

And instead of QE 1–996 for a course in Orientation Geology, use

QE 26–31, QE 41, and QE 61

7. Objectivity. When you discover a class number for a subject which you think ought to be included in a course description, but the description does not actually include the subject, do not assign that number.

8. Duplication. (When a course in Department B is assigned a number already assigned to Department A.) All decisions, even when the factors seem complex, can be reduced to an either/or situation. The technique is to determine what are the vital factors, to organize them in an either/or manner, then test them with the individual case. To help resolve the problem of duplication, Figure 1 shows a flow chart based on the either/or logic.

To enable librarians to make an estimate of the time needed to classify the college catalog, University of Southwestern Louisiana catalogers kept track of the time spent on their study. The figures are given in Table 1.

Conclusions

University of Southwestern Louisiana catalogers, after the project, offered several observations worth repeating. Many of the problems were the usual ones associated with classification and were already familiar, but a number of the observations required careful study. The most difficult was Duplication of Courses (Guideline no. 8). If one department offered a course which was identical or nearly identical to a course offered by another department, which one should be assigned the relevant class number or group of class numbers? The Guideline could not resolve every conflict. Several duplications were unsolvable and were set aside for consultation with departments or even the curriculum committee.

The catalogers felt that, ideally, one cataloger should classify the entire catalog. But the work load was too heavy for one cataloger and so was divided among four, each cataloger being assigned specific departments. To help reconcile the inevitably divergent interpretations of courses and guidelines, one person, the head cataloger, performed one final overall editing.

Several professors, especially in the science departments, devoted many hours interpreting course content and suggesting class numbers. On the whole, they were quite interested in the project and thought it worthwhile.

The catalogers ran into another problem—an old one—the poor course descriptions. Quality of these descriptions varies greatly. Some are too wordy or obscure, others are too general or cryptic. We decided that course descriptions would be interpreted quite literally. No numbers were assigned to a subject not explicit in that course description. This, of course, meant that many large blocks of class numbers would not appear in our final list, an inherent feature of the entire project.

The catalogers admitted that Guideline no. 7 was also difficult to follow. To list class numbers for subjects we think are important was and is a great temptation. Important though they may be, the university catalog was the authority. We could not, on our own authority, list these important subjects unless they were in the catalog.
Yes

Keep the class no. in Dept. B

Drop from Dept. B

Yes

Is the no. assigned to Dept. B normally associated with Dept. B?

No

Could one of these other nos. be kept in Dept. B?

Yes

No

Does the course in Dept. B have only one class no.?

No

Yes

Does Dept. A offer one or more courses to which a no. in that class has been assigned?

No

Yes

Keep the class no. in Dept. A

Drop from Dept. A

FIGURE 1. Decision flow chart. What to do when a classification number assigned to a course in Department B has already been assigned to a course in Department A. The number fits both courses equally well.
This raises the question of whether excluded numbers are irrelevant numbers. Since we are aware of the considerable subjectivity involved, we prefer to say that most books with class numbers among the listed numbers have a high relevance, and that books with class numbers not among the listed numbers have a lower relevance. We expect that, occasionally, some books outside the profile will be highly relevant and that some books within the profile will be highly irrelevant. This system makes no judgments about the merits or quality of each book. It simply says that based on a subject analysis of the course content, and the resulting class number profile, every book, whether a very good one or a very bad one, has either a high or a low relevance to the curriculum. Naturally, to assure year-to-year relevance the list would need annual updating with numbers for new courses added and those for dropped courses deleted.

Ideally, we might rate the relevance of books on an arbitrary scale ranging from 0.0 to 1.0. Books with class numbers matching those in our list would be perfectly relevant and would have a rank of 1.0. A book with a class number not in our list—for example, QA 267—might be assigned a relevance of .5 because, after all, QA 267 is mathematics and we do have a mathematics department. A book with a class number for a subject not assignable to any department might have a relevance of 0.0. Finally, it may sometimes be practical to rank only the class numbers. Such a scale of relevance, for books or class numbers, could be the next development in a system of classified courses.
WOLFGANG M. FREITAG

Wanted: A New Index to Exhibition Catalogues

The absence of bibliographical control over, and index entries into, the substantial body of exhibit catalogs produced annually by the world's museums works considerable hardship on art libraries and their patrons. This paper urges that steps be taken soon to fill this important lacuna in bibliographical coverage of art literature.

Not long ago, in an article dealing with "Bibliographical Organization in the Humanities," Conrad Rawski quoted from Brunetière these words of wisdom: "Qui scit ubi scientia sit, ille est proximus habenti."1 The simple truth of this dictum will certainly not be contested by scholars or by reference librarians, but what surprises the reader of the article is that its author seems so well pleased with the general state of bibliographical services for art and that he is apparently not aware of a major missing link in the bibliographical chain spanning the field. Professor Rawski, who is a teacher and not a practicing librarian, can be forgiven for his lack of consciousness of where the shoe pinches art librarians, bibliographically speaking. Others who are closer to the firing line have felt that pinch for several years. James Humphry III, until recently Chief Librarian of the Metropolitan Museum of Art, has pointed a finger at this crucial information gap in a special issue of Library Trends devoted to subject bibliography:

The publication of catalogs in conjunction with museum and gallery exhibitions has signalled a great need for bibliographical control of this increasingly important material. These catalogs are no longer a two or three-page handout to serve as a guide for the casual visitor, but often represent a scholarly oeuvre-catalogue of definite documentation relative to the works exhibited, and with extremely useful bibliographies.2

In 1962 Jane Clapp published her bibliography of Museum Publications3 in which a small number of exhibition catalogues are listed. The emphasis on her work, however, is published catalogues of permanent museum collections. Only those exhibition catalogues in print and obtainable from museums at the time of compilation of the bibliography are included. Important categories of catalogues, such as the catalogues of museums listed in Books in Print, and therefore available through regular book


Dr. Freitag is Art Librarian in the Fogg Museum at Harvard University.


trade channels, are specifically excluded. The most useful feature of the book is the index, which lists in one alphabet authors and subjects. These refer the information seeker to the publication number which is assigned to each entry in the bibliography. Unfortunately, the non-serial character and the geographical and editorial limitations of *Museum Publications*, which also attempts to cover anthropology and archaeology in addition to art, severely limits its usefulness as a reference tool. Another bad feature is the many misspelled names and titles.

The reason so many libraries have found it necessary to compile their own systematic indexes to exhibit catalogues is that the two most important current bibliographies, *Art Index* and *Répertoire d'Art et d'Archéologie*, have not been able to cope with this large and difficult segment of art literature.

For many years the reference library of the world-famous firm of art dealers, M. Knoedler and Co., has struggled valiantly to keep *au courant* its index to exhibition catalogues. This index attempts to establish, without a break, the complete documentation of each individual art object shown that has ever been of professional interest to the company or has passed through its sales rooms. Every summer teams of college students have found employment, trying to catch up with the accumulated indexing backlog and producing great quantities of index cards that must be filed and stored in a formidable bank of catalogue card cabinets. The race against time and the swelling flood of new catalogues makes the task of catching up a more hopeless one every year.

It is not so much the quality of the many outstanding scholarly catalogues, which serve as vehicles for the latest research results and which are also made available later in hardcover format as monographs, that are solely to blame, but rather the fantastic increase in numbers of the many not-so-scholarly catalogues which are nevertheless important for the documentation of art historical facts that so utterly defy handling by traditional bibliographical methods. In his book, *The Museum Age*, Germain Bazin makes the statement that there are today more than four thousand museums in the United States alone, and that a new one opens every three and one-third days. Since most of these museums publish catalogues occasionally and some quite regularly, and since the museum age is not limited geographically to North America, it is obvious that we have arrived at a turning point in the history of art bibliography. How long will it take before the flood of exhibition catalogues engulfs us all?

The *Art Index* does not cover exhibition catalogues at all, although it does include reviews of exhibitions which appear in periodicals and museum bulletins. The *Répertoire d'Art et d'Archéologie*, which goes beyond the scope of a periodical index and does list monographs as well as articles, includes a very limited number of exhibition catalogues, all of them of monographic calibre; they are identified by the symbol for monographs, i.e., an asterisk which precedes the item number, and the notation “-Exposition” which follows the body of the bibliographical entry. The extent to which exhibition catalogues are covered in this selective bibliography is, of course, absolutely inadequate. Moreover, the time required for the preparation and publication of the *Répertoire* results in a time lag of two or three years, which makes it practically useless as a reference tool for “current awareness” and current factual information.

A solution to these problems of coverage and timeliness has been attempt-

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The Bulletin indexes and abstracts the catalogues of circa five hundred museums and galleries in twenty countries in Europe and America. The abstracts are written by specialists under the direction of an able editor, Eva Kroy Wisbar. The Bulletin is an excellent first step in the right direction, that of universal bibliographical coverage of exhibition catalogues. It is doubtful that it can ever be more than the first step. At the present time WACB lists only those catalogues of which the Centre is able to procure sufficient quantities for commercial distribution, and even as the firm expands its network of agents to gather this elusive type of literature, which in many countries does not even get into the regular booktrade, it cannot hope also to expand a bibliographical by-product which must by its very nature remain a nonprofit, if not a money-losing, proposition. And yet this beginning is excellent. These bibliographical listings should not be allowed to wither because of lack of funds; rather, they ought to be expanded in several directions at once.

Obviously, exhibition catalogues which fulfill an archival as well as a current information function and which today are of the first importance for art scholars, museum curators, dealers, and collectors will have to be gathered more quickly before they go out of print, and all parts of the world must be covered more systematically. The Worldwide Art Catalogue Centre as a booktrade organization should be free to concentrate on this end of the operation. But the catalogues must also be indexed differently from the serial and periodical articles with which the present bibliographical services deal, and for this a separate organization is needed. Both the works of art themselves, that constitute the content of exhibition catalogues, and the literature about them should be analyzed in much greater detail and in greater depth than has been possible with traditional methods of abstracting and indexing. For instance, random access should be possible to the following types of information: Artists, Media, Locations, Provenance, Iconography (Subject), Chronology of Exhibitions, Collectors, Sponsoring Organizations, Principal Bibliography for each work mentioned. All this information should be cumulated at regular intervals to form a permanent bibliographical record of the literature as well as a documentation of the works shown.

It is obvious, from the exacting demands upon the new tool which we envisage, that it can only be produced with the aid of today's most advanced data processing technology, and that it will require a considerable staff of expert abstractors. Ideally, the editorial offices of the New Index should be located at the site of a master collection of the catalogues from which the information is culled. In time, after a sufficient amount of information has been collected, the computerized index could form the basis for an art historical data bank and referral center. It would be possible to prepare specialized bibliographies on demand and to retrieve specific information from the data stored. Repackaging and selective dissemination of information on the basis of user profiles would be a major activity of the center and perhaps even one that has certain business possibilities for defraying part of the costs.

Convinced that the formidable prob-

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Wanted: A New Index to Exhibition Catalogues / 543

lems of information and document control in the fine arts demand radically new methods for their solution, a group of nine American art historians, museum curators, and art librarians met in New York early in the spring of 1967, and in May of that year submitted an application for a grant to the Council on Library Resources. The grant would have enabled the group to conduct an economic feasibility study for the project which has been described in the preceding paragraphs. Unfortunately, after an initially favorable reception, the application was later dropped by the Council, partly because of a shift in its policy and partly because of ongoing projects of a technically similar nature which it was supporting.

The need for a solution to the problem of bibliographical control of exhibition catalogues continues to exist. Today it is even more pressing than it was two years ago, and it is not likely that it will diminish in the foreseeable future. The writer of this article, who convened the New York meeting in 1967, hopes that by bringing the problem once again to the attention of educational foundations, learned societies, bibliographers, information scientists, and bibliographical publishers, it might attract the interest of some organization capable of conquering it.
BOOK REVIEWS


This I know. Any book about the Pacific Northwest is a collector's item. Northwestern Approaches passes muster for other reasons, too. It is something in the nature of a bibliography printed and published in British Columbia, and issued in a limited edition of 750 copies. The book derives from a series of lectures given to the students of the University of British Columbia School of Librarianship in 1966. Mr. Smith devoted his talks to “books written by the explorers of British Columbia and its approaches during the century which began with Bering's first voyage and ended with Sir George Simpson's second journey to the Columbia.” This meant no inhibition, however, for “British Columbia and its approaches” virtually covers the Pacific rim.

The book contains tidy thumbnail accounts of major explorations conducted from Russia, Spain, Great Britain, France, and the United States during the hundred years, 1728 to 1828. Mr. Smith's repertory of books arising from these explorations includes works that any librarian or schooled layman must take cognizance of if he wishes to reside and live long in the Pacific Northwest. Regionalism is inexorable, and nobody in the Pacific Northwest can afford to be a landlubber. To survive, one must be conversant with Captain Vancouver's ship, the Discovery, and know that Captain Cook had a Discovery, too, as well as a Resolution. Northwestern Approaches provides a key to these and approximately forty other never-to-be-forgotten ships, including the New Hazard of Stephen Reynolds, the Astrolabe of La Pérouse, the Neva of Urey Lisiansky, and the Argonaut of James Colnett. Furthermore, Mr. Smith would never forsake relevant place names. A cursory examination of his check-list and index evokes such memorable names as Vitus Bering of Bering Sea, Robert Gray of Gray's Harbor, Simon Fraser of Fraser River, and George Vancouver of Vancouver Island, along with Alexander Mackenzie, David Thompson, Otto von Kotzebue, John Jewitt, and Baron de Lesseps.

The longest chapter in Northwestern Approaches has to do with British land and sea explorations conducted, it is so hard to believe, during the height of the American Revolution. Mr. Smith's narrative contains sufficient historical chronology to place each bibliographic entry in a proper perspective.

Northwestern Approaches should be as acceptable to aficionados of Pacific Northwest Americana as it can be useful to compatriots who wish merely to acquire a hazy impression of early explorations and voyages. The narrative is clear and easy on the mind. Since Hilton Smith is an experienced librarian and alert bookman, he is nicely attuned to British Columbiana. He has enriched his presentation with twelve judiciously chosen illustrations. Dr. Samuel Rothstein originated the library school lectures and contributed a Foreword to them.—Harry C. Bauer, University of Washington.


Community Junior College Libraries: Development, Needs, and Perspectives should have been the title of this publication. This brief volume is a collection of nineteen papers submitted at the Conference on Junior College Libraries held at the University of California, Los Angeles, June 21-24, 1967. Except for Ralph S. Emerick, Director of the Library at Stephens College, who represented the private junior college library, all the program
participants were either from or directed their remarks specifically to the new public community junior college library.

Reiterated by the conference speakers was the fact that an open door admissions policy and low tuition assures the community college a heterogeneous student body, and this in turn necessitates a commitment to comprehensive education. Courses of study must be provided for adult education, the college transfer student, technical-occupational training, and there must be cultural programs for the community. The conference recognized the magnitude of the undertaking and the responsibilities it placed upon the library.

Repeatedly expressed was the view that the goals of such institutions could not be achieved by traditional methods or by emulating four-year institutions. The call was for creativity, perception, innovation, and experimentation.

The community college library indeed faces a tremendous task if it is to supply materials for students with such varied educational abilities and goals. Traditionally, college libraries have been used by the scholar and the researcher. The community college library's aim is to reach all segments of its heterogeneous student body and not have the library isolated from the learning processes.

Speaker consensus was that the goal of the library should be to become truly a learning resources center. This would mean joining books and periodicals with TV and radio, films, filmstrips, slides, tapes, records, microforms, and graphics, and providing audio-tutorial approaches, programmed learning, dial access listening, or any other media that would stimulate the individual learner. The reviewer agrees that the library should be a learning resources center, but is troubled that many of the papers gave the impression that simply combining the proper quantities of hardware and software with a librarian willing to use the equipment or work with an A-V specialist would ipso facto make the library a dynamic institution. In this regard the remarks of Norman E. Tanis, Director of the Library at Kansas State College, were refreshing. "Much of the current innovation in education is like an end-of-season sale in an audiovisual supply shop or in a warehouse for cut-rate computers, 'His' and 'Hers' talking typewriters, wet and dry carrels, or a Marshal McLuhan environment. There is a good deal more to a junior college library than the proper mixture of hardware and software." A student can shut his eyes during a film or block out sound as easily as he can refuse to open a book.

Although it suffers from some of the usual generalizations and redundancies inherent in conference proceedings, the book is recommended to librarians and other educators primarily because it spells out promising approaches to solving the problems of the developing community junior college library.—Linda Osterman, Peace College.


Shri Saha wrote the first part of this book as Chief Librarian (and business manager, thanks to his Columbia Library School training) of the Indian Statistical Institute in Calcutta; the second part resulted from a three-month travel grant supplied by the U.S. Air Force Office of Scientific Research. While in the United States Saha visited our gurus, Robert Hayes, Don Swanson, and Jesse Shera. He made the necessary pilgrimages to our temples of documentation, NASA, the National Library of Medicine, the Library of Congress, Crerar, and Project Intrex, plus such lesser shrines as Bell and Esso, Smith Kline and French, and Lockheed Missiles and Space Company, and three different IBM sites.

My chief regret about this book is that Saha is not a more vivid writer. I would have liked to know what we look like through Indian eyes. I treasure Eric Jantsch's OECD report "A Study of Information Problems in the Electrotechnical Sector" if only for such sentences as: "... one of the most surprising incidents on his tour, when, at Douglas Aircraft... he was received by a circle of nice motherly ladies who turned out to have designed and to run one of the most ad-
vanced computerized systems for selective dissemination of information that can be found anywhere today."

You will not find such gems in Saha's book. You will find about 100 pages on India and another fifty or so on the U.S.A.

The Indian section, from my limited knowledge of the country, is excellent. It is certainly mandatory reading for anyone planning a trip over there. I only wish that Saha had taken the time to include names and addresses of the librarians responsible for the activities he describes. If you're going to send a letter 12,000 miles, it would be nice to know where to write it.

Saha's section on the U.S.A. is competent and pedestrian. He read the proper authors and drew the proper conclusions. His four chapters, special libraries and technical information centers; libraries and machines; library education and information science; and trends in research and development might serve as notes for four undergraduate lectures. And, just possibly, a Rousseauan librarian who had never been exposed to the wonderful world of computers and information centers might find this a painless way to lose his/her/their/its innocence.

Required for library and information science schools, harmless for others.—Harold Wooster, Air Force Office of Scientific Research.


The author, with more than thirty years experience in the field of librarianship, including posts as Deputy Librarian, Calcutta University; Librarian, National Archives of India; and lectureships in library science at Calcutta and Burdwan; is well qualified to write on the subject implied by the title. Consequently, the reader expecting a treatise on the history and present development of libraries and librarianship in India will be disappointed, because much of the content deals with other matters. According to the preface, it is concerned with current trends in all aspects of library work and library science and its development in India "vis-à-vis the same in the libraries of U.K. and Scandinavian countries." It is mainly intended for students reading for the degree or diploma courses in Indian universities. Since it does contain a variety of useful, albeit miscellaneous information, it may serve this purpose well. However, the lack of a unifying theme or mode of presentation is unfortunate. The rather long chapters are uneven in content and importance.

Although libraries in India in the past, and the impact of modern libraries on society and its implications, are covered in a matter of thirty-two pages, the numerous names, dates, and places mentioned provide a useful starting point for further inquiry. The discussion on the library movement in India during the last fifty years is a helpful guide to the field. It covers library development, legislation, and the history of library associations, and contains some sketchy statistics, primarily for West Bengal, plus many names and dates. One wonders why this chapter should close with a brief section on the "British Library Association" and libraries in Britain, since this is a subject which has received adequate coverage in other sources.

The section on copyright brings together in convenient form information on the Indian copyright situation not readily available elsewhere. Comparisons with Western and international copyright practices are useful and interesting.

The chapters on libraries—academic and special (including school libraries), public and general—contain a mixture of historical, descriptive, and hortatory matter such as "... unattractive surroundings unconsciously tend to inculcate lack of respect for books in children and this should be stopped."

The material on bibliography in India covers bibliographical services, such as the Indian National Bibliography, the early history of printing and writing in India, the preparation of manuscripts and editing, and the Indian book market. There is a useful bibliography of early printed books in the various Indian languages and short descriptions of the work of William Carey, Joshua Marshman, and William Ward, who were active in the late eighteenth and
early nineteenth centuries in developing printing in India.

The section on the public library and national development makes the customary case for the importance of libraries in developing countries but more specific reference to India would improve it. There is substantial reference to the Scandinavian countries, which reflects the author's study tour of libraries in the United Kingdom and Scandinavia as a UNESCO fellow in 1951-52. His report to UNESCO appears as an appendix. Other appendices include education for librarianship in India, a valuable expansion of the DDC for Indic subjects, and a description of the working of a district library.

It may be a quibble to note that this book would have benefited from more careful editing, attention to bibliographical detail, and some up-dating of references. In scanning the dates of the items cited in the bibliographies, where dates were given, only three appeared later than 1960, and none later than 1965.

In summary, the historical and descriptive material is of interest and value to any reader concerned with the development of libraries and bibliography in India; that dealing with organization and management is too elementary for the informed student. Nevertheless, the author has succeeded in his stated purpose to produce a general textbook for use by students preparing for diploma or degree examinations in library science in Indian universities.—Carl W. Hintz, Oregon State System of Higher Education.

ABSTRACTS

(The abstracts below are selected from those prepared for publication in Research in Education by the ERIC Clearinghouse for Library and Information Sciences at the University of Minnesota. Unless otherwise noted, copies of the following documents are available, by purchase, in microfiche or hard copy format, from the ERIC Document Reproduction Service, National Cash Register Co., 4936 Fairmont Avenue., Bethesda, Maryland 20014. Orders must include ED number.)


This paper reviews the research on design and operation of research libraries sponsored by the Purdue University Libraries and the Purdue School of Industrial Engineering. The use of mathematical models in library operations research is discussed. Among the mathematical methods discussed are marginal analysis or cost minimization, computer simulation, and statistical inference. The shelving models, storage and retrieval models, and search and file organization models developed by the Purdue operations research group are described.


The unclassified and unlimited bibliography compiles references dealing specifically with the role of computers in information sciences. The volume contains 249 annotated references grouped under four major headings: Time Shared, On-Line and Real Time Systems, and Computer Components. The references are arranged in accession number (AD-number) sequence within each heading. Four indexes, AD-Numeric, Corporate Author/Monitoring Agency, Personal Author, and Contract, are appended to facilitate access to references.

The unclassified and unlimited bibliography compiles references dealing specifically with the role of computers in information sciences. The volume contains 239 annotated references grouped under three major headings: Artificial and Programming Languages, Computer Processing of Analog Data, and Computer Processing of Digital Data. The references are arranged in accession number (AD-number) sequence within each heading. Four indexes, AD-Numeric, Corporate Author/Monitoring Agency, Personal Author, and Contract, are appended to facilitate access to references.


This survey of current library resources and services in Washington is based on questionnaires; visits to public, university, college and community college libraries in the state; and statistics from state and national governmental sources. The inventories of public and academic libraries include discussions of standards applicable to the libraries and descriptive text and charts which give pertinent information about these libraries. The examination of school libraries is based on a survey published in 1964 under the supervision of the State Office of Public Instruction, which is updated with recent comparative statistics, and an historical sketch of school libraries in Washington. Trends and survey recommendations indicate a transition from the book-centered school library to an integrated library/audiosvisual program of services. A comprehensive examination of community college libraries in the state emphasizes the recent growth in Washington's community colleges and the effect of this on their libraries. Also included in this report is a survey of the Washington State Library, prepared in 1965, which gives information on services to the public libraries of the state. Appendices include a union list of periodicals in libraries in the Spokane area, the survey questionnaires and checklists, and a bibliography of ninety items used in conducting the inventory.


Part I is a discussion of the following project tasks: (1) development of an online, real-time bibliographic data processing system; (2) implementation in library operations; (3) character sets; (4) Project MARC; (5) circulation; and (6) processing operation studies. Part II is a brief discussion of efforts to work out cooperative library systems development. Part III lists projects and task efforts in man-months. Part IV lists tasks underway and projected for 1967/68. Appendix A includes samples of bibliographic data input worksheets and output catalog card array. Appendix B is a paper given by Charles T. Payne on May 1, 1967, at the Clinic on Library Application of Data Processing conducted by the Graduate School of Library Science, University of Illinois, covering the problems and progress of the project.


This fifth and final report describes activities since June 1965. Centralization of the Eisenhower Library Collection was completed early in 1965 and a circulation system became operational in April 1965. The main portion of this report focuses
on various aspects of the circulation system such as preparation of identification cards; the photographic process; circulation control operations (date due stickers, key punching and verifying, library utilization, work in process delay, quality control, and computer operations); and a simulated borrowing study. It is proposed in the report that an all-numeric code replace the call number or input identifier in the circulation system. The processing and updating procedures for the shelflist on tape are described. Acquisitions, cataloging, and activities of the library staff are discussed briefly.


The report deals with one basic question: What does a large research library do when its catalog shows signs of serious deterioration? The catalog under consideration in this report was the Main Public Catalog of the Research Libraries of the New York Public Library. The catalog has nine million cards, some of which date back to 1857. A 1965 report by Seoud Matta, "The Card Catalog in a Large Research Library: Present Conditions and Future Possibilities in the New York Public Library," recommended putting the catalog into book form in order to preserve it. This report is devoted to the technical details of preserving the present catalog and planning for the future. Major conclusions of the study recommended that: (1) the catalogs of the Research Libraries of the New York Public Library be divided chronologically as soon as possible; (2) the present (or retrospective) Public Catalog be reproduced photographically in book form; (3) the future (or prospective) catalogs be produced in a combination of card and book form from a store of machine-readable data; and (4) a Central Serial Record be created to contain acquisition information, cataloging and holdings data, and bindery records for all serial publications in the Research Libraries.


Two aspects to be considered in designing a storage system for library materials are the fraction of the collection which is to be stored and the criteria to be used for selecting materials for storage. This study demonstrates that for a given selection criterion least-cost storage quantities can be assessed with stored materials. Two storage criteria, one based upon the age of the materials and the other utilizing the individual book usage rates, are discussed and compared. For the age policy the objective is the determination of a least-cost critical age at which materials are transferred to storage and a definition of the fraction of the collection that should be stored. The model assumes that the circulation rate of the books declines with age according to an average geometric pattern of obsolescence.


Addressed to both librarians and systems analysts, this book attempts to apply the analytic methods of operations research and systems analysis to the operating problems of the library. The first part of the book discusses theoretical models with emphasis on the pattern of book use, on its change with time, and on the problem of estimating and evaluating the degree to which the library satisfies or fails to satisfy the seeker of information, and includes chapters on Library Use and Probability Distributions, Arrivals and the Poisson Distribution, Queues and Book Circulation Interference, and Book Use and the Markov Process. In the second part, an actual sample library—the Science Library at M.I.T.—is chosen to show how this theory can assist the managing librarian. An appendix gives tables of the Markov-Poisson Process.
The Statutes at Large; Being a Collection of All the Laws of Virginia from the First Session of the Legislature, in the Year 1619

By William Waller Hening. Facsimile reprint. 51/2 x 81/2. SBN 8139-0254-1. LC 69-18889. 13 vols., $175.00 the set

Hening's Statutes at Large . . . of Virginia is a compilation of all the acts passed by Virginia legislative assemblies from the meeting of the first assembly in 1619 through the year 1792. Long recognized as an important source for historical, legal, and genealogical research, these thirteen volumes continue to provide historians with excellent source material on the settlement and growth of our nation. The Statutes at Large . . . of Virginia affords, in Hening's words, "a rich treasure of information relative to the state of society among the first settlers; . . . the rise, progress and establishment of our civil institutions; and generally such political events as afford a lesson to posterity of something worthy to be imitated and something to be shunned."

Seeing America and Its Great Men
The Journal and Letters of Count Francesco dal Verme, 1783-1784

By Count Francesco dal Verme. Translated and edited by Elizabeth Cometti, Professor of History, West Virginia University. xxxiii, 147 pp., frontis., illus., maps, index. 53/4 x 93/4. SBN 8139-0255-x. LC 69-17333. $6.00

Seeing America and Its Great Men contains letters and a journal written by Count Francesco dal Verme, a distinguished Italian nobleman, during his tour in the United States from 1783 to 1784. Dal Verme's account, written solely for his family's information and pleasure, gives concise information about places, activities, and people from New England to South Carolina and Jamaica. His tour with George Washington to the New York frontier in 1783 is the most detailed report available of that journey. Miss Cometti's introduction and annotations enlarge the scope of the text and make it a useful survey of life in the United States toward the close of the eighteenth century.

Lawes Divine, Morall and Martiall, etc.

Compiled by William Strachey. Edited by David H. Flaherty, Assistant Professor of History, University of Virginia. xxxviii, 101 pp. 5 x 73/8. SBN 8139-0271-1. LC 78-76184. $2.00 (James town Documents)

Lawes Divine, Morall and Martiall, etc. are the laws drawn up for the colony of Virginia between 1609 and 1612. These laws represent the first written manifestation of the common law in America, however harsh some individual provisions may seem. Written for a small populace and largely military in content, the laws indicate many of the problems the English first had to overcome in the New World.

The Virginia Germans

By Klaus Wust, Editor of The Report, a publication of the Society for the History of the Germans in Maryland. xii, 310 pp., maps. 61/8 x 91/4. SBN 8139-0256-8. LC 69-17334. $8.50

A colorful part of Virginia's history is uncovered in this first comprehensive study of German settlement and integration in Virginia from 1608 until World War I. The author has collected and interpreted a great deal of information never before published, and he combines it with forgotten facts as well as passages of history familiar to general readers. Identification by name and origin of many German families in Virginia provides an important new source of information for genealogical research.

This is the most thoroughly researched study of the German background of any one of the fifty states in the Union. Although it is a scholarly work, The Virginia Germans is highly readable and of immediate interest both to the historian and to the casual reader.

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