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Edited by John MacKay Shaw

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Criteria for Appointment to and Promotion in Academic Rank

To determine the status of librarians in the university community, what it means, and how it is determined, questionnaires were sent to one hundred major American academic institutions. Of eighty-seven respondents, seventy indicated that their librarians had academic status in one measure or another. There is need for clarification and standardization of practice. Criteria used for determining promotion are discussed, and a draft statement of policy in the matter is proposed.

The move to grant academic status to librarians has been the prevailing trend for a number of years and is now generally accepted, although the exact definition of academic status remains uncertain. Regardless of the institutional pattern, however, it is evident that academic status does carry with it certain privileges and obligations. Whenever obligations are involved, criteria must be formulated and applied to determine the degree to which the obligations are met.

This paper is an attempt to determine the criteria and the procedures commonly used for the evaluation of teaching faculty and the extent to which these criteria, or modifications thereof, are applied to librarians. From this basis, it may be possible to draft for consideration a statement of policy and procedure.

In order to gather information, a questionnaire was sent to the seventy-one academic libraries holding membership in the Association of Research Libraries plus a group of twenty-nine institutions, most of which were state universities. Replies were received from eighty-seven. Sixteen respondents indicated that librarians did not have academic status and one that "since practically all aspects of this subject are under intense study . . . with a view to overhauling the whole plan, we deem it inadvisable to answer at this time." The material which follows, therefore, is based on replies from seventy institutions.

The pattern used in the questionnaire emerges quite clearly in the analyses of responses which follows, with perhaps one exception. One series of questions concerned procedures for reviewing recommendations for promotion with particular reference to the existence and use of a "personnel committee." Within the context of this series of questions "personnel committee" referred to an institutionwide committee to review all


2 Mr. Hintz is University Librarian, University of Oregon. This paper is one of a series of reports made by the Academic Status Committee of ACRL's University Libraries Section. The Committee invites comments from members of ACRL.

3 In these sixteen libraries, however, academic status was held by some librarians in five, ranging from the director only to "approximately 43 per cent holding faculty status in one of the college faculties."
recommendations for promotion regardless of the point of origin, as opposed to the device of internal school or departmental committees.

**Faculty Rank and Title**

The largest group of the respondents—twenty-six—reported that librarians held full faculty rank and title. In these institutions the criteria generally used for faculty appointment and promotion ranked as follows:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success in teaching</td>
<td>25</td>
</tr>
<tr>
<td>Research and publication</td>
<td>25</td>
</tr>
<tr>
<td>Professional competence and activity</td>
<td>24</td>
</tr>
<tr>
<td>Service to the university</td>
<td>23</td>
</tr>
<tr>
<td>Creative work (artistic, dramatic, etc.)</td>
<td>21</td>
</tr>
<tr>
<td>Public service</td>
<td>17</td>
</tr>
<tr>
<td>Advanced degrees</td>
<td>1</td>
</tr>
<tr>
<td>Length of service</td>
<td>1</td>
</tr>
<tr>
<td>Effectiveness in administrative assignment</td>
<td>1</td>
</tr>
<tr>
<td>Evaluation of department members of higher rank</td>
<td>1</td>
</tr>
<tr>
<td>No general criteria but determined by department concerned</td>
<td>1</td>
</tr>
<tr>
<td>By department concerned in part</td>
<td>3</td>
</tr>
</tbody>
</table>

Twenty-two indicated that these criteria, or others in general use on the campus, were applied to librarians and fourteen that they were applied equally. Specific modifications listed were the following:

- Doctorate not required for promotion
- Greater stress on professional competence and nature of work performed
- Less emphasis on publication
- Two master's degrees accepted in lieu of doctorate
- Greater emphasis on professional competence and performance
- Potential for long-term contribution to the institution

Seven of the respondents indicated a separate set of criteria based on the general ones (so much so that some checked both answers) in the nature of "almost the same," "additional distinctive criteria for librarians," "librarian's evaluation," or "greater weight to professional activities than to publication and research."

Practice varies in that twelve institutions had a campuswide personnel committee to review all recommendations for promotion and thirteen did not. A more important point is that in twenty-one cases the procedure was the same for librarians and the general faculty. Five followed a different procedure; greater reliance was placed upon the recommendation of the library director and his key administrative personnel.

**Equivalent Rank**

Thirteen institutions reported patterns of equivalent rank; i.e., a Librarian L-LV or L-V series, corresponding to the customary academic titles of rank, such as instructor to professor.

In these institutions, the criteria generally used for faculty appointment and promotion ranked as follows:

<table>
<thead>
<tr>
<th>Criteria</th>
<th>Rank</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success in teaching</td>
<td>9</td>
</tr>
<tr>
<td>Research and publication</td>
<td>9</td>
</tr>
<tr>
<td>Creative work (artistic, dramatic, etc.)</td>
<td>8</td>
</tr>
<tr>
<td>Professional competence and activity</td>
<td>8</td>
</tr>
<tr>
<td>Service to university</td>
<td>8</td>
</tr>
<tr>
<td>Public service</td>
<td>4</td>
</tr>
<tr>
<td>Educational attainments</td>
<td>1</td>
</tr>
</tbody>
</table>

In applying these criteria, or others in general use on the campus, eight indicated that they were applied to librarians and four that they were applied equally. Specific modifications listed were the following:

- Two master's degrees accepted in lieu of doctorate
- Greater emphasis on professional competence and performance
- Potential for long-term contribution to the institution
Five respondents indicated a separate set of criteria. In general, these represent adaptations of general faculty criteria by expressing them in library terms.

Five of the institutions in this group reported the existence of a campuswide personnel committee to review all recommendations for promotion; seven did not. Eight of the thirteen libraries stated that the procedure followed was the same as for general faculty. Of the three which indicated a different procedure, the library administration played a greater part.

**ASSIMILATED RANK**

Seven institutions reported a pattern of assimilated rank; *i.e.*, library title with the rank of . . . (catalog librarian with the rank of instructor). In these institutions, the criteria generally used for faculty appointment and promotion ranked as follows:

<table>
<thead>
<tr>
<th>Criterion</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Success in teaching</td>
<td>7</td>
</tr>
<tr>
<td>Research and publication</td>
<td>7</td>
</tr>
<tr>
<td>Professional competence and activity</td>
<td>7</td>
</tr>
<tr>
<td>Creative work (artistic, dramatic, etc.)</td>
<td>6</td>
</tr>
<tr>
<td>Service to university</td>
<td>7</td>
</tr>
<tr>
<td>Public service</td>
<td>4</td>
</tr>
</tbody>
</table>

In applying these criteria, or others in general use on the campus, four indicated that they were applied in full to librarians and three others indicated that they were applied in part. On the question of equality of application, two felt that the criteria were applied equally, two in part, and three responded in the negative. Three of the respondents felt that the criteria applied to librarians were not separate from those in general use on the campus. Three felt that they were sufficiently modified as to make them distinct. Four institutions utilized a campuswide personnel committee; three did not. Two reported exactly the same procedure for librarians as for general faculty. Three reported mixed procedures and two reported different procedures. In the latter two the decision making power rested with the library administration.

**VARIABLE PATTERNS**

The fourth group, comprising twenty-four respondents, reveals an almost bewildering array of patterns under the general umbrella of academic status. Sixteen of the group reported that they held neither full faculty rank and title nor assimilated rank. The remainder provided mixed responses or no response at all on these points. In other words, twenty-four groups of librarians with academic status do not fall into any readily definable classification.

The following are some illustrative schemes:

- Librarians with formal teaching duties hold faculty rank and title with all others holding assimilated rank
- Academic status and full faculty rank and title above instructor
- Department heads are also assistant professors of library science. Non-department heads have not been assigned rank of instructor, although this could be done if there seemed any reason
- No rank or tenure, but all other benefits, including membership on Senate, committees, etc.
- No rank or membership on faculty, but faculty benefits apply. Some librarians have been elected to membership in a college or school faculty
- Faculty status, but no formal rank. Voting power in faculty meetings and eligibility for election to Senate and other offices
- No rank, but all privileges and responsibilities, such as serving on Senate and committees
- All rights of faculty, except title and some committee memberships
- Fully academic with review for advancement and appointment by Dean of Faculty. Librarians do not carry title unless they (1) hold a teaching appointment or (2) are “with the rank of . . . .” The librarian holds faculty rank and title; seven associate or assistant librarians are “with the rank of . . . .” In effect, all perquisites except rank, tenure, and sabbaticals
Status has been used to include sabbatical leave, voting in faculty meetings, committee memberships. In short, everything except rank or rank equivalent, which is now being sought.

Among this group, the criteria generally used for faculty appointment and promotion ranked as follows:

- Research and publication: 15
- Professional competence and activity: 14
- Service to university: 12
- Success in teaching: 11
- Public service: 7
- Creative work (artistic, dramatic, etc.): 6
- Academic qualifications: 2
- No general criteria: 6

In applying these criteria, nine indicated that they were applied to librarians and five that they were applied equally. Nine respondents stated that separate criteria were used. Eight of the respondents reported the existence of a campuswide personnel committee to review all recommendations for promotion. In one instance, the committee restricted its jurisdiction to teaching faculty only. Nine replied that the procedures for the promotion of librarians were the same, or very similar, to those for teaching faculty. Of the eight reporting a different procedure, the principal distinction rests in the greater role of the library administration.

**APPLICATION OF CRITERIA**

The general tendency, regardless of the exact pattern for academic status, is to use the commonly accepted criteria for faculty evaluation although with modifications or special interpretations in some instances. Table 1 reveals some striking variations in application of faculty criteria, degree of application, and the evaluative procedures for promotion between the four groups of institutions.

Without attempting to read too much into this statistical exercise, it seems clear that institutions which have accorded full rank and title to librarians are evaluating them in terms of academic criteria to a greater extent than those institutions which follow a different pattern of academic status. This finding is substantiated by the fact that the “variant group,” where academic status is poorly defined or not at all, makes by far the worst showing in the application of academic criteria. In some cases, in this group, the criteria are simply expressed in terms of a position classification (description) and suitability of the person for that position.

Since one of the major questions is “Should, how shall, or do, or can librarians meet the same criteria as teaching faculty?” it is pertinent to examine the criteria as they pertain to librarians before any consideration is given to the development of different criteria, or even substantial modification of existing ones. Many librarians are already meeting existing criteria, and there is no reason why more should not be able to do so, providing that their position descriptions called for them to do so, and if their work assignments were adjusted accordingly.

1. **Success in teaching.** This criterion requires special interpretation if it is to apply. Some librarians are engaged in formal classroom teaching, and many

<table>
<thead>
<tr>
<th>Institutional Group</th>
<th>Number of Institutions</th>
<th>Per Cent Faculty Criteria Applied</th>
<th>Per Cent Criteria Applied To Same Degree</th>
<th>Per Cent Same Procedure Followed</th>
</tr>
</thead>
<tbody>
<tr>
<td>Full rank and title</td>
<td>26</td>
<td>84.6</td>
<td>56.8</td>
<td>80.8</td>
</tr>
<tr>
<td>Equivalent rank</td>
<td>13</td>
<td>61.5</td>
<td>30.8</td>
<td>61.5</td>
</tr>
<tr>
<td>Assimilated rank</td>
<td>7</td>
<td>50.0</td>
<td>50.0</td>
<td>16.7</td>
</tr>
<tr>
<td>Variant</td>
<td>24</td>
<td>37.5</td>
<td>20.8</td>
<td>37.5</td>
</tr>
</tbody>
</table>
more engage in informal teaching through their daily work with students in the library. Additional special examples are library orientation lectures and guest lectures on bibliographic resources in subject areas. A possible substitution here would be performance of specific duties assigned in the library. In view of the lack of emphasis placed on teaching as a criterion for advancement in most universities, this factor should not weigh too heavily against librarians.

2. Research and publication. This seems to be the major roadblock, particularly as it looms large in the promotion of teaching faculty. The fact that work schedules make research and writing for publication difficult for librarians is a stark reality. Some librarians find it possible to meet this criterion. Perhaps more would do so if it were clearly understood that it is expected of them. Conceivably, more personal recognition should be given to the bibliographical research performed by librarians in support of the research activities of others and in the development of research collections and to administrative, internal studies and reports.

3. Professional competence and activity. Demonstrated by performance on the job, by active participation in professional organizations (not limited necessarily to library associations), by evidence of continued growth, by mastery of bibliography, and by evidence of being an informed person in matters of educational philosophy and administration.

4. Service to the university. This may take the form of service on university committees, or working with student groups, such as foreign student organizations, honorary and professional societies, and others.

5. Creative work (artistic, dramatic). In addition to the obvious—creative writing, musical composition, painting, sculpture—participation in the performing arts, such as theatrical productions and musical performances, qualifies. The planning and preparation of some library exhibits involves considerable creativity.

6. Public service. As evidenced by service to the wider community.

**FORMAL CRITERIA**

Respondents were asked to describe criteria used for librarians if they were separate and distinct from those used for faculty in general and to send examples of rating forms or other materials used in the promotion process if they could do so conveniently. The fact that most of the respondents failed to do so suggests that formal statements of this nature are either lacking in most institutions or are not readily available in convenient form.

**THE NEED FOR POLICY**

As pointed out at the beginning of this paper, academic status stands badly in need of definition. It is used to cover many differing circumstances, ranging from full faculty rank and title for librarians at one end of a spectrum to highly-structured position-classification situations which are considered academic because appointments fall within the jurisdiction of the personnel officer for academic affairs (dean of faculties, vice-president for academic affairs, etc.).

Clarification on this point could take one of three forms: full faculty rank and title, assimilated rank, or equivalent rank. Of these, the preferred pattern is that of full faculty rank and title as being most conducive to the development of a standard of librarianship which will best serve the educational, research, and scholarly needs of the academic community. This is based on the assumption that the contributions of librarians in academic libraries are so closely allied to those of academicians in all phases that at times they verge on the inseparable. Support for this thesis is found in the fact that the institutions now granting
full rank and title to librarians are applying generally accepted academic criteria and procedures successfully, and to a greater extent than those institutions which do not grant such status.

A SUGGESTED POLICY STATEMENT

Librarians should be accorded recognition proportionate to their qualifications, experience, and duties. A librarian should hold a graduate library degree or equivalent from a recognized institution, should participate in professional library organizations, and should perform duties of a professional nature. The determination of degrees to be regarded as terminal or appropriate should be vested with the library faculty, subject to the approval of the president. Proper recognition consists of faculty rank, tenure, and salary, and the procedure for advancement provided for other faculty members should apply to librarians.³

Criteria for advancement of professional library personnel include the following:

A. Teaching or instructional effectiveness shall be interpreted to mean the special kind of teaching, either group or individual, direct or indirect, that a librarian does. Such instruction may be judged by:
1. qualified student and faculty opinion;
2. informal opinion of colleagues;
3. effectiveness in the development and use of library resources for undergraduate, graduate, and research programs;
4. efficiency in the performance of library technical operations supporting instructional and research programs.

B. Research or creative work should be rewarded, recognizing the severe limitations on such activities because of the demands on time and energy. This may be judged by:
1. publication of books, articles, reviews, and reports of a scholarly nature;
2. creative achievement involving musical composition, creative writing, original design, skillful production, and superior artistic performance;
3. preparation of high-level administrative studies;
4. mastery of bibliographic resources.

C. Professional competence and activity. This may be judged by:
1. active participation in professional associations;
2. efforts for professional growth through further study;
3. study for advanced degrees;
4. knowledgeability in matters of educational philosophy and administration.

D. Service to university, including committee and administrative activity, is judged by:
1. service and leadership in the internal affairs of the university beyond the duties of the position held on the faculty;
2. supervision of library personnel;
3. demonstrated administrative ability and capacity for administration.

E. Public service includes participation on statewide committees, participation in professional activities in the state and nation, consultation, and community service.

³ Since this will vary from institution to institution, no attempt is made to suggest a specific procedure here.
Measuring Classified Circulation According to Curriculum

Circulation statistics can be precise reflections of library use according to the curriculum. The statistics can help the librarian decide how to allocate the budget to departments. Traditional counts, by department personnel or by broad Dewey or LC classes, are imprecise. An analogy between curriculum and circulation can be constructed by classifying courses in the college catalog (by DC or LC), rearranging the numbers thus generated by department, and then counting circulation within those groups. The analogy is thus a quantitative measure and a precise reflection of library use according to curriculum.

Can circulation statistics reflect comparative use of the library by academic departments? What relationship does use of the library bear to the curriculum? How does one measure use according to curriculum instead of by department personnel?

These questions, and their variations, have long concerned the librarian who wants to know which departments are the heavy library users, and which should have the greater number of dollars for books. Traditional use counts may not give the answers. For example, some libraries categorize their loans according to the teaching departments whence the borrower comes. If an individual borrows ten books, ten loans are credited to his department. Such counts may not accurately reflect use according to the curriculum. A faculty member or student does not always borrow books which are exclusively related to his department or major. When a physics major borrows a mathematics book, should the loan reflect use according to the physics department or according to the mathematics department? Under usual procedure, the loan would be counted for physics. Many such loans would suggest that the physics department borrows more books than the mathematics department. But if the loans are a result of a mathematics assignment, or instigated in some other way by the mathematics department, or even by a third department, we ought not to give the credit to the physics department. As a parameter to help determine which department should receive the larger fund allotment for books, number of loans to department personnel is interesting, but unreliable. A simple head count of department members and enrollees, without a circulation count, might measure the same thing and would be simpler.

Other libraries keep count of circulation by broad Dewey or LC classification. These libraries can show that each year so many books were borrowed in the 300's, the 400's, the 500's, the B's, the P's, the Q's, etc. These figures do a fine job of showing how many books were circulated in these broad classifications. But, as with loans to department personnel, the figures may bear little re-
relationship to the curriculum. The scope of DC or LC classes does not necessarily coincide with the scope of a department's curriculum. Even when the broad classifications are broken down into more detail—let us say, in the DC classification, by the tens instead of by the hundreds—this still does not give us a true picture of curriculum use. Not all courses offered by the geology department fall into 550's, and not all books in the 550's may be of interest to the geology department. Furthermore, a course normally thought of as falling within the scope of one department may be offered by another. At South Dakota School of Mines and Technology, for example, Descriptive Geometry (DC class 515) is offered by the civil engineering department, rather than the mathematics department.

Nevertheless, we would still like to know how many books borrowed relate to the geology curriculum, the civil engineering curriculum, the mathematics curriculum, and so on. Rather than counting heads or volumes in meaningless broad categories, a precise analogy can be created between circulation and the curriculum. This can be done by classifying a department course much as we do a book: according either to DC or LC. We then arrange sequentially the classification numbers thus generated, but within the departments. The resulting numbers, perhaps several hundred, form an analogy; and the circulation pattern therefore can reflect use by department subject alignments rather than by members or enrollment. Any book borrowed within the analogy would thus be counted for that department.

In another paper, the author used this device to establish an analogy between academic departments and the number of books published annually in the United States. The mechanism is the same. By classifying the courses; by grouping the classification numbers, whenever possible, into spans to embrace a larger subject scope; and by rearranging these numbers according to department, we can arrive at a total number of books published or circulated which have a direct relevance to the department concerned. By using the same sequence of numbers for both purposes (or for any other purpose), correlations can be drawn between books published and books circulated; and, of course, comparisons can be drawn between one department and any other.

Table 1 shows a selected list of assigned DC classes. These numbers (based on the 16th edition) codify the departments only at SDSM&T, and naturally would vary somewhat from college to college. Note how they lend themselves to short or long spans but are sometimes quite specific and isolated. The long spans help to cut down the list and usually account for most of the titles in a department. But sometimes the specific numbers have considerable influence on a department total, especially if many books fall into that class, as is the case with 510.78.

The daily tabulations are fitted into their spans and can be totaled as needed. Ideally, all sources of circulation

### TABLE 1

Departments and Their Inclusive DC (16th) Groups—Partial List

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<thead>
<tr>
<th>Department</th>
<th>DC Groups</th>
</tr>
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<tbody>
<tr>
<td>Mathematics</td>
<td>510.0-510.77</td>
</tr>
<tr>
<td>Computation center</td>
<td>510.78</td>
</tr>
<tr>
<td>Mathematics</td>
<td>510.8-514.0</td>
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<tr>
<td>Civil engineering</td>
<td>515.0</td>
</tr>
<tr>
<td>Mathematics</td>
<td>516.0-519.0</td>
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<td>Geology</td>
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</tr>
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<td>Geology</td>
<td>549.9-551.4</td>
</tr>
<tr>
<td>Meteorology</td>
<td>551.5</td>
</tr>
<tr>
<td>Geology</td>
<td>551.6-559.0</td>
</tr>
<tr>
<td>Geology</td>
<td>622.1</td>
</tr>
<tr>
<td>Mining engineering</td>
<td>622.9-622.9</td>
</tr>
<tr>
<td>Civil engineering</td>
<td>624.0-628.0</td>
</tr>
<tr>
<td>Meteorology</td>
<td>629.1324</td>
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</tbody>
</table>

### TABLE 2

Number of Circulated Books Relevant to Each Department*

<table>
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<tr>
<th>Department</th>
<th>No. of Books</th>
<th>Per cent of Total</th>
<th>Enrollment</th>
<th>Circulation/Enrollment Ratio</th>
</tr>
</thead>
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<tr>
<td>Biology</td>
<td>142</td>
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<td>—</td>
<td></td>
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<tr>
<td>Chemical engineering</td>
<td>165</td>
<td>2.55</td>
<td>82</td>
<td>2.1</td>
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<td>Chemistry</td>
<td>363</td>
<td>5.60</td>
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<td>Civil engineering</td>
<td>543</td>
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<td>108</td>
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<td>Computation center</td>
<td>142</td>
<td>2.19</td>
<td>—</td>
<td></td>
</tr>
<tr>
<td>Electrical engineering</td>
<td>450</td>
<td>6.96</td>
<td>146</td>
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</tr>
<tr>
<td>Geology</td>
<td>600</td>
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<td>36</td>
<td>16.7</td>
</tr>
<tr>
<td>Social science and humanities</td>
<td>2180</td>
<td>33.65</td>
<td>(Total)</td>
<td>3.1</td>
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<tr>
<td>Mathematics</td>
<td>560</td>
<td>8.64</td>
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<td>16.5</td>
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<tr>
<td>Mechanical Engineering</td>
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<td>Metallurgy</td>
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<td>Mining</td>
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<td>Paleontology (museum)</td>
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<tr>
<td>Physical education</td>
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<td>Physics</td>
<td>604</td>
<td>9.32</td>
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<tr>
<td><strong>TOTAL</strong></td>
<td><strong>6478</strong></td>
<td><strong>100.0</strong></td>
<td><strong>706</strong></td>
<td><strong>9.2</strong></td>
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</tbody>
</table>

* Because some categories have been left out, the figures cited in this paper do not necessarily represent the complete and true picture of SDSM&T circulation.

should be tapped: department libraries, reserve, and other special collections. Unclassified periodicals cannot contribute to the statistics. Since periodicals are a special problem anyway, we are here dealing only with monographs.

Table 2 shows a typical set of figures for the number of circulated books relevant to each department. The loans, as distributed among the departments, reflect curriculum use of the library. Notice that the figure for social sciences and humanities (one department at South Dakota School of Mines and Technology) is much larger than any of the others. This is not surprising, even though a major is not offered in that department. Almost everyone, however, is interested in its books. A professor of mining engineering may as likely borrow *Uses of the Past as Geochemical Methods of Prospecting*. Furthermore, all students are required to read in the humanities. Such interest lends assurance to the feeling that humanities must not be neglected in a heavily weighted technical and scientific curriculum.

Physics and mathematics, two departments which are not only self-contained, but whose curriculums contribute to other departments, have a relatively small number of majors. Yet, as many, if not more, books circulate in these departments as in the high enrollment departments. This results in a high circulation/enrollment ratio for mathematics and physics and suggests that at least these two departments, like the humanities department, need continued heavy support. Of course, other departments with high ratios or high circulation also need heavy support.

A note of caution is in order. Unless each department shares in the subject analysis and in the compilation of DC numbers, the faculty will be skeptical of results. The librarian must, therefore, interpret and use the results with great care.

With dangers recognized and proper care taken, this and similar studies can have considerable value. For example, data, as tabulated above, collected over a given time span, now make possible direct comparisons between the number of books published and the number of books borrowed. Such a study is now underway at SDSM&T.
and studies we will be able to say that the books falling within the scope of one department are used more than another, and that we should perhaps buy more books in that area than in another.

Other functions which might be analyzed by the device are the existing book collection (measurable from the shelf-list); books published throughout the world (measurable, say, through the British National Bibliography); number of periodicals published in the United States and throughout the world (measurable from such compilations as New Serial Titles—Classed Subject Arrangement); journal articles in abstracting publications which have a detailed classified arrangement, such as some of the Commonwealth Agricultural Bureau journals. Any of these media, especially those involving books, might be compared to the collections in large universities by actually measuring shelflists. The University of Michigan Undergraduate Shelflist would be a convenient tool to analyze, since it is generally available.

Additional studies in any of these media would have considerable value; and multivariate analyses such as multiple regression, of any or all, may be especially revealing.
Classification Trends in Junior College Libraries

A survey was made of the classification schemes employed in America junior college libraries. Of 690 institutions reporting, just over three-fourths use the Dewey scheme, considerably fewer than the 96.5 per cent that reported using the DC in a similar study in 1961. Of the 159 new junior colleges established since 1961, 38.2 per cent are now using LC, manifesting a trend toward use of the latter scheme. The author proposes that professional organizations actively encourage adoption of the LC Classification scheme.

During the last few years many librarians have discussed the merits of the Dewey Decimal versus the Library of Congress Classification systems. The concept of centralized cataloging, although generally on the fringes of library practice for many years, is intimately connected with the present dialogue (or dispute, depending on one’s perspectives or prejudices) over DC versus LC. That there is a need to rethink the entire classification picture is obvious from the glut of published material available and the increasing costs of technical processing in libraries.

An increase in interest in the LC Classification system has become apparent since 1960. Numerous articles and studies have appeared which make it reasonably clear that the application of the LC system is less costly if accepted with the spirit of centralized cataloging firmly in mind. Objective analyses of the classification problem bear out this statement.1

1 It is recognized that cost studies at one institution will not necessarily be transferrable to another since wages very often fluctuate by region and area. In terms of comparative costs between the DC and LC systems, however, the proportional economies and advantages (in speed, uniformity, for instance) of the LC system, remain most obvious if the system is applied with the principle of centralized cataloging firmly in mind.

During the last seven years junior colleges have increased throughout much of the country. A survey of classification use and trends in this developing movement in higher education seemed appropriate in order to determine the awareness and knowledgeability of junior college librarians concerning the problems of library classification.

The survey was conducted by means of a postal card form with a covering letter explaining the project. The information requested was limited to seven questions. Aside from the institutional identifications, the most important questions dealt with the classification systems used and the period the present system had been in use.

Only one previous survey2 in recent years attempted to obtain data on the classification systems used by junior college libraries. The Rowland survey covered all junior colleges listed in the "Junior College Directory, 1961"3 and...
obtained slightly over a 50 per cent return. The present survey covered all junior colleges listed in the 1967 Junior College Directory, which represented all of the fifty states, District of Columbia, Canal Zone, Puerto Rico, and Virgin Islands. Replies were received from 690 of the 837 two-year institutions listed in the directory, or slightly better than 82 per cent.

**CLASSIFICATION**

The present survey identifies by name only the Dewey and the LC Classification systems. Four junior college libraries used other classification systems. No attempt was made to identify these four systems since for all practical purposes only the Dewey and the Library of Congress systems are in widespread use in this country. Other classifications may be used by some general academic libraries and even public libraries which appear less concerned with the implications of their individualism. It is appropriate in the confines of the library school classroom to discuss theoretical aspects of various classification systems, but as a matter of pragmatic recourse, these systems are used only by those libraries who have been caught in the expensive theoretical web of their own solipsism.

Rowland's survey obtained useful information from 315 libraries and indicated that as of 1961, 96.5 per cent of junior college libraries were using Dewey with only 3.5 per cent using the Library of Congress system. The present survey indicates that there is a tendency now to prefer the Library of Congress system. Table 1 summarizes the data collected from the 690 cooperating libraries.

It is unfortunate that not all of the junior colleges listed in the 1967 directory were willing to reply to the questionnaire. A comprehensive report listing the classification systems used by all junior college libraries would better serve the interests of classification analysis and uniformity and would encourage the recently established national committee on junior college libraries to deal in the most effective manner with the hitherto ignored issue of classification systems. Obviously the same information would better serve the present and future development of nearly all academic libraries.

Table 2 is a complete listing by state of the results of this classification survey. Some states—especially California, New York, Pennsylvania, and Wisconsin—show the most reclassification activity to the LC scheme. The states with the highest number of junior colleges using the LC Classification are California (12), Florida (12), New York (16), Pennsylvania (14), and Wisconsin (12). Of those libraries presently reclassifying, nearly all have initiated their change to

<table>
<thead>
<tr>
<th>Classification</th>
<th>Number</th>
<th>Percentage</th>
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</thead>
<tbody>
<tr>
<td>Dewey Classification</td>
<td>532</td>
<td>77.1</td>
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<tr>
<td>Library of Congress Classification</td>
<td>92</td>
<td>13.3</td>
</tr>
<tr>
<td>Changing from DC to LC</td>
<td>58</td>
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</tr>
<tr>
<td>Planning on changing from DC to LC</td>
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<td>.6</td>
</tr>
<tr>
<td>Other classifications</td>
<td>4</td>
<td>.6</td>
</tr>
<tr>
<td>Total</td>
<td>690</td>
<td>100.0</td>
</tr>
</tbody>
</table>


*It appears curious that ACRL, or the Resources and Technical Services Division of ALA have not had the interest to keep an up-to-date record of classification use in the libraries of this country. It is unfortunate that the national professional library organizations that create the standards for library development do not deal with the very important area of library classification. Not until ALA, ACRL, and AAJC decide to put teeth into their published standards (such as the American Chemical Society has done) through strict accreditation requirements that deal not only with minimum standards but also with such matters as classification systems and centralized cataloging will these organizations be really effective.*

### TABLE 2

<table>
<thead>
<tr>
<th>State</th>
<th>Number</th>
<th>DC</th>
<th>LC</th>
<th>Planning/Considering Change to LC</th>
<th>Other</th>
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<td><strong>Total</strong></td>
<td>837</td>
<td>532</td>
<td>92</td>
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</table>
the Library of Congress Classification since 1962.
Since 1960, 225 new junior colleges have been established. Of this number, twenty-one have decided to reclassify their libraries to the LC system. Only fifty-eight of the 690 libraries cooperating reported reclassification projects. This indicates that 36.2 per cent of those libraries involved in reclassification have been founded since 1960.
Table 3 represents a summary listing of junior college libraries established since 1960 indicating their original library classification scheme.
Of the 159 libraries which started using the Dewey Decimal system, twenty-one later began reclassification to the LC system. Considering this development, the totals of Table 3 are revised in Table 4 to reflect the present classification situation.
Table 5 is a listing of the twenty-one two-year institutions that have changed from Dewey to LC since their founding (1960 or later).

**CONCLUSION AND IMPLICATIONS**

Although the majority of junior college libraries presently established (and being established) use the Dewey Decimal Classification, the ratio is substantially less now than in 1961. More than thirty-eight per cent of the libraries established since 1960 are using or are reclassifying to the Library of Congress system. This, of course, is an encouraging development if a national system of library classification and centralized cataloging is desirable. Since libraries have agreed on main entry forms, catalog card format, and information, it seems a natural step to accept a standardized classification system.

It is a bit distressing to contemplate the reclassification projects of the twenty-one two-year institutions, with their extra expense, time, and energy required because of the inadequate original planning, lack of knowledge, and unfamiliarity with the actual nature of available library classification systems. This may be attributed in part to the general inadequacy, by and large, of library school instruction, or perhaps also to complacency and disinterest of the national professional association. One wonders what institutional administrations think of their librarians who recommend reclassification projects only one to four years after the establishment of the library.

Certainly, as Dougherty\(^7\) points out, reclassification costs are high. Obviously such switching of classification systems in a short period indicates poor library planning that can only denigrate the capabilities of librarians.\(^8\)

Pirie refers to his survey of processing activities in junior college libraries as reminiscent of the labors of Sisyphus.

No matter where or however intensively one’s efforts have been directed at recording the myriad practices and procedures of scores of libraries . . . [one] sees questions

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### Table 3

<table>
<thead>
<tr>
<th>Year Established</th>
<th>DC</th>
<th>LC</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>1960</td>
<td>23</td>
<td>2</td>
<td>1</td>
</tr>
<tr>
<td>1961</td>
<td>23</td>
<td>4</td>
<td></td>
</tr>
<tr>
<td>1962</td>
<td>23</td>
<td>2</td>
<td></td>
</tr>
<tr>
<td>1963</td>
<td>24</td>
<td>6</td>
<td></td>
</tr>
<tr>
<td>1964</td>
<td>18</td>
<td>11</td>
<td></td>
</tr>
<tr>
<td>1965</td>
<td>30</td>
<td>15</td>
<td></td>
</tr>
<tr>
<td>1966</td>
<td>18</td>
<td>25</td>
<td>1</td>
</tr>
<tr>
<td>1967</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Total (225 = 100%)</td>
<td>159 (71.7%)</td>
<td>65 (29%)</td>
<td>1 (0.44%)</td>
</tr>
</tbody>
</table>

### Table 4

<table>
<thead>
<tr>
<th></th>
<th>DC</th>
<th>LC</th>
<th>Other</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total (225 = 100%)</td>
<td>138 (61.3%)</td>
<td>86 (38.2%)</td>
<td>1 (0.44%)</td>
</tr>
</tbody>
</table>

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\(^8\) It is acknowledged that in some instances the school administration may be public-school oriented and unresponsive to the recommendations of librarians. In this case, a strong statement, or better still, library accreditation standards established by a national association, would force a more responsive relationship.
imperfectly phrased, understood, and answered. The simple truth is that methods of processing in a more or less homogeneous group of libraries are . . . bewildering in their variety and ingenious in their meeting of problems in different ways.\(^9\)

Harvey scarcely reassures concerning the quality of librarianship practiced in junior college libraries when he makes such a statement as

. . . there is almost no other aspect of librarianship where the gap is so great between theory and practice. Junior college libraries are among the poorest kinds of libraries.\(^10\)

\(^*\) This library reported that it started using both the DC and the LC Classifications! Now, however, it is using the LC system exclusively.

In view of such reports as these it is doubtless unlikely that institutional administrations are always basically to blame for the unwise policy decisions in junior college library operations. The responsibility is primarily that of the librarians in charge.

Shores\(^11\) indicates that there is a growing trend to independent study and heavier use of library resources in junior college libraries. He emphasizes the central processing trend which will free the librarian from technical routines that can be accomplished more economically. But Shores did not address himself to the classification aspect of centralized proc-


essing. Whether a library uses the services of a commercial processing firm or cooperates in centralized processing is, among a number of factors, a matter of available staff and cooperative willingness. Whether it is significantly less costly, however, depends basically on the classification system used. The classification determines the character of the total operation and whether all aspects of a centralized processing operation can be fully exploited for the lowest unit cost per title and volume.12

The “Guidelines for Establishing Junior College Libraries”13 do not refer to any preferred classification system or, for that matter, to library classification at all. The only reference is to the operations dependent on such a system. For example:

Unless there is a large staff available to order and process the new books, or unless commercial processing services are used, a neighboring university or public library may be contracted to catalog and process the basic collection.14

This statement is good as far as it goes, but some would feel that it leaves unanswered the entire question of classification and its cost of application. The proper application of the Library of Congress Classification can in some cases cut cost nearly in half if standardized procedures and routines are carefully designed and practiced. The librarian should approach LC without the involved trappings associated with the Dewey Decimal Classification in its application.15

14 Ibid., p. 503. A recommendation to accept with caution in lieu of the technical service operations in some university and public libraries.
15 This is dependent on labor costs, of course, which vary across the country. Large university libraries are sometimes hardly models of careful cost economy and reasonable efficiency in their classification applications, modifications, and technical processing; e.g., Stanford

The Seattle area of Washington State, for example, has several two-year community colleges which have been established since 1961. When queried why they had not used the Library of Congress Classification, it was indicated that the Dewey Decimal system was preferred because: (1) it was familiar to the students, and (2) the University of Washington, to which they were feeder schools, used Dewey. Classification costs or economies were scarcely mentioned. Unfortunately for them, the University of Washington library changed to the Library of Congress Classification in January 1967. Now, although at least one of the community college libraries would like to change to LC, the embarrassment of recommending such a project so soon after being established (1964) presents a costly dilemma.

What this could be interpreted by some to mean is that if these libraries had been more familiar with the literature, had analyzed their operations in greater depth, had investigated more fully the available classification alternatives, and had considered more adequately their operational expenses, they would have found it more difficult to use the rationalization of student familiarity as a primary reason in a classification decision. Library literature and library experience seem to indicate that the majority of library users do not care what classification system is used.

Unfortunately, librarians are seldom more than products of their professional training and associations. Although the immediate responsibility is that of the individual librarian, the far-ranging effects are an indictment of the profession.
Organizational Patterns of Academic Science Libraries

New theories about how to organize academic collections have been developed in recent years, and many practitioners of these theories have distinguished themselves by advancing their ideas. While discussing the pros and cons of various organizational possibilities, however, such as centralization and decentralization, authors seem occasionally to have tended to focus primarily on their effects on the library as a whole rather than on the user. Also, while there appears to be agreement about the peculiarity and the cruciality of science and technology collections, papers devoted exclusively to examining their inherent problems are scarce. This paper therefore considers the following question: "Which forms of library organization can best serve the needs of the academic scientific community while remaining within the administrative and financial limitations of institutions of various sizes?" The information and viewpoints contained in the literature are used as a guide for formulating alternative answers.

Since the 1940's there have been many changes in the pattern of scientific research. A major factor has been the availability of federal funds for investigations to be conducted on campuses. Consequently there are more people (teaching staff, students, and others) doing research and publishing their results who need information on what has been and is being done in their field. The boundaries of previously clearly delineated subject areas are disappearing, and while specialization is growing, specialized information needs cut across borders.

Practitioners of experimental sciences (such as chemistry, physics, and biology) often have "peculiar" working and reading habits and consequently have claimed special library requirements. While conducting an experiment they claim, regardless of hours of day or night, to need immediate access to reference works and current periodicals as closely located to their laboratories as possible.

Studies of users' habits have also shown "that scientists and engineers spend a significant amount of their reading time reading in comparatively few journals, spend comparatively little time reading in the central libraries, and engage in undirective browsing to a considerable extent, but again in comparatively few documents."

Historical Development of Organizational Patterns

Before surveying briefly the general development of academic library organization it is important to note that the term "organization" has two distinct

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meanings. The first meaning is the division of work, or the unit of operation, often called a department. The second meaning is the system by which these units are coordinated and controlled. This terminology is borrowed from the management field. Although these meanings are not synonymous, the word “organization” is applied freely to both.

According to a definition by E. A. Wight, the following six characteristics form the basis of division of work in the library profession today: (1) function (e.g., acquisition, circulation); (2) activity (e.g., order, repair); (3) clientele; (4) geography; (5) subjects; and (6) form of materials (e.g., maps, documents). The historical progression toward increased specialization in the organization of collections is by “function,” followed by “form of material,” and most recently by “subject.” These three organizational patterns can be characterized as follows.

Functional organizations divide their labor among acquisition, cataloging, circulation, and reference departments. Organization by form of material is useful when there is a large increase in the types of materials to be maintained, such as documents, serials, or maps.

Subject departmentalization originated in the so-called “seminar collections.” Faculty members of single (usually science) departments placed their private collections in a convenient location in their building in order to assure close proximity of needed materials at all times. The size of these collections increased with time and the administrative problems became obvious to all concerned. It must be noted that the development of subject departmental libraries on the campus followed the path set by the public libraries. “Since 1924, with the notable exception of Philadelphia, virtually every major public library in this country has been very largely or entirely a subject departmentalized library.”

It must also be noted that although these three patterns are distinguishable, they did not develop in a vacuum independently of each other. They were created out of necessity and often existed together within the same organization.

Organization by subject was an early attempt to provide better services to the reader. The basic assumption was that the closest proximity of materials to those who most needed them would increase the frequency of use of materials. The rapid proliferation of subject departmental libraries, however, creates serious administrative problems. Coordination, cooperation, and communication among the branches and with the main library become increasingly difficult. There is, therefore, a basic conflict between the desires of the users and practical administrative and financial considerations.

A possible answer to the problems created by completely decentralized reader services is a form of centralization where a larger unit, sometimes called a division, is formed. This can be based on one common characteristic, such as subject, clientele, or geography.

The remainder of this paper will examine, compare, and assess the pros and cons of the subject departmental and subject divisional patterns of organization with particular reference to the fields of science and technology.

### Decentralized Subject Departmental Organization

Decentralized subject departmental organization is only feasible for large institutions, since only they can afford to have library units serving one or two individual specialized departments such as chemistry or physics. Typically the

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3 R. E. Maizell, “The Subject Departmentalized Public Library,” CRL XII (July 1951), 255-60.
branches are supported by the central library, which is usually functional in its organization. Cataloging and the business aspects of acquisition are handled centrally. A notable exception is, of course, Harvard, where decentralization is so complete that “in 1955 at least 40 different cataloging centers with widely varying rules [were in existence].”

“This system of organization provides very satisfactory and probably effective service to upperclassmen, graduate students, and faculty. . . . The needs of the undergraduate [however], tend to be overlooked.”

The characteristics, advantages and disadvantages of this system can be summarized as follows—

**Advantages:** (1) close proximity of materials to greatest number of potential users; (2) possibility of twenty-four-hour-a-day access to facilities without serious threat to security; (3) possibility for providing individualized services by introducing certain special library techniques common in industry; and (4) better over-all departmental participation and increased interest in library affairs.

**Disadvantages:** (1) duplication of materials; (2) duplication of records; (3) duplication of personnel; (4) overall cost increase as a result of numbers 1, 2, and 3 above; (5) lack of effective administrative control—problems in coordination, cooperation, and communication.

These advantages and disadvantages are well recognized by the two parties involved: the faculty on the one hand, and library administrators on the other. Strong feelings, both pro and con, have been registered during two recent surveys in which opinions from members of both parties were solicited by the faculties of the University of Cincinnati and Florida State University, independently of each other. D. A. Wells, chairman of the physics department at the University of Cincinnati, conducted a survey by sending out 126 questionnaires to other physics department chairmen. It was his purpose to determine the sentiment of his peers about decentralization and consolidation of science collections. His action was prompted by plans to unify all science libraries at the University of Cincinnati and opposition to the move as registered by the faculty.

Findings of the survey have been publicly summarized. The majority, eighty-four, of the respondents favored the branch system; seventeen had no strong commitments; and three argued for consolidation. One of the most interesting opinions was expressed by Vincent E. Parker, chairman of the physics department at Louisiana State University. Most of the science materials at LSU had been recently moved to a new building and organized along the centralized subject divisional plan, and Mr. Parker stated his and his colleagues’ unequivocal opposition to the arrangement. The science division at LSU, as discussed by its head, M. M. Hanchey, contains all science and technology materials except government documents, which are part of the general documents department. There also remained a separate chemistry library located in the chemistry building. Her description of the division leaves one with the definite impression that Dr. Parker’s contention to the contrary notwithstanding, the reorganization had been consented to and approved by the entire faculty.

N. O. Rush, director of libraries at Florida State University, in a recent article summarized the dilemma at his in-
stitution, their methods of attacking it, and the solutions chosen. In order to determine whether the establishment of a geographically separate physics library was feasible, a separate committee of the faculty library committee was appointed and charged with studying the problem and “making long range policy recommendations concerning divisional and departmental libraries.” As part of the study, a survey was conducted in which letters and detailed mail questionnaires and data sheets were sent to 63 universities and colleges throughout the United States, selected either on the basis of their pre-eminence in the educational or library fields or because their library problems might be comparable to those at FSU.

In addition to describing the content of the questionnaire, excerpts from respondents in the library field are given. Based on the preliminary studies, analysis of returns, and the local situation, the following recommendations were made: (1) A divisional natural science collection should be established in the FSU Science Center Complex. (2) All functions and technical processes should be centrally handled by the main library. (3) No further physical separation of the collections should occur.

If one accepts the assumption that the raison d’être of science and technology libraries is to serve scientists, it is apparent from the above that the departmental library system is the preferred choice of the patrons. Librarians, however, while appreciating the needs, desires, and habits of the scientific users, must work within a framework of financial and administrative limitations.

Centralized Subject Divisional Organization—Three Variations

One observer has stated: “The idea of organizing centralized university library service along divisional subject lines, proposed in the 1930’s, has been the greatest advance in university library service in the last twenty years.” Presently there are three clearly distinguishable variations on this theme: (1) administrative centralization; (2) complete geographic centralization; and (3) modified geographic centralization.

Administrative centralization has been recognized as an absolute necessity by large institutions organized along decentralized departmental lines. Often an assistant director for public services and/or a division head for such broad subject areas as science and technology has been installed to coordinate activities, enforce uniform policies, and decrease the span of command without necessitating physical changes in the location of various collections. Instead of reporting directly to the director, the department heads are supervised by the assistant director or division head, who then reports to the director. Further strengthening of organizational lines ideally would consist of the following hierarchy: department head, division head, assistant or associate director, and director.

Complete geographic centralization became the medium-sized university library’s vehicle for achieving the results produced by the large university’s dispersed subject departmental system. With the construction of many new library buildings following World War II, it became possible to provide subject orientation along broad lines (e.g., science and technology) by classifying and clearly separating these divisions of human knowledge within the confines of one physical unit. Variation in the organization of functional units (acquisition, cataloging, and circulation) is wide among institutions. A brief summary of the known advantages and disadvantages of the system follows.

Advantages: (1) availability of

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pooled material resources, needed in view of the new specialized and overlapping subject areas; (2) reduction in user's time in locating materials of the above mentioned areas; (3) feasibility of automation resulting in centralized record keeping and provision of new types of services; (4) better utilization of professional staff due to reduction in clerical duties; (5) closer administrative control.

Disadvantages: (1) loss of proximity of materials and users; (2) probable loss of widespread faculty involvement and interest in library affairs.

It was the University of Colorado, under the direction of Ralph Ellsworth, that first executed nearly complete geographic centralization in 1940. Only materials pertaining to geology remained separate. The following quotation by the director appraises the situation:

As to the reaction to the centralization, my impression from discussion with various faculty members is that the advantages of centralization of materials, professional supervision and longer hours of opening for the divisional libraries are generally recognized as outweighing any disadvantages. . . . The only real disadvantage I can see is that occasionally it may be inconvenient for a [science or technology] faculty member to have to come to a central library. However, I feel that a sensible policy in regard to office or laboratory collections will provide materials which are frequently or constantly in use.\(^\text{11}\)

The University of Nebraska, under Frank Lundy's direction, centralized its operations and organization in 1945. In many respects that institution has developed subject divisional organization to its "ultimate." The science and technology division is one of five divisions under the direct supervision of an assistant director. The division comprises the following sections: divisional reading room in the main library; principal branches (medicine—located off campus—and agriculture); branches (such as chemistry and geology); and laboratory libraries (such as physics and pharmacy). All are dispersed on campus. It becomes obvious from the above that although the basis of administration and service is subject matter, complete geographic centralization was not feasible. The central reading room and stack area can be considered a storehouse of materials in general science and in overlapping fields of interest to a variety of specialists. Also, they provide general reference and bibliographic services to the entire university community.

While discussing the organizational pattern at Nebraska one must mention the introduction of the dual assignment concept, although it is an extension rather than a component of organization.\(^\text{12}\) In practice it means that the functions of selection, cataloging, classification, and servicing of materials are handled by the staffs of the several divisions, who are, ideally, subject specialists dividing their time among these operations. Mr. Lundy believed that the advantages provided by this system are manifold. They include familiarity with the collections, decrease in cataloging backlog, and consequently prompt availability of new materials resulting in goodwill and appreciation by the faculty. Recruitment of new librarians also becomes easier.

As has already been noted, the faculty's interest and involvement in library affairs is evident. Professor D. A. Wells's article\(^\text{13}\) summarizing the results of his survey on decentralization and consolidation of science collections was previously described. Dean Jesse H. Shera of the school of library service at Western Reserve University answered Dr. Wells publicly. Publishing in the scientific magazine in which Dr. Wells's article appeared, Dean Shera argued for


\(^{\text{13}}\) Wells, \textit{op. cit.}.
consolidation by relating his points to those discussed by proponents of decentralization in the survey. His counterreasons are as follows: convenience for students, as opposed to considerations of faculty alone; importance of interdisciplinary relationships; economic advantages; improved services and collections; and the possibility of automation. It is his contention that the above are components of new concepts in library service that must be recognized and understood by the faculty.14

The importance of faculty recognizing the new concepts in modern library service is well summarized by N. N. Nicholson in the conclusion of her report on the “Centralization of Science Libraries at Johns Hopkins University.”15

[Centralization] will be successful...only if complete agreement is reached by faculty, university and library administration that it is the best way in which the greatest number can be effectively served...under reasonable financial expenditures.

Modified geographic centralization is the third variation on the theme of subject divisional organization. Widely dispersed subject departmental and highly centralized subject divisional libraries are the two extremes of organizing by subject matter. Since there are no two identical situations and institutions, only comparable ones, it is inevitable that a compromise solution, absorbing the best of the two systems would emerge. It is always the local condition (such as history, geography, and size of enrollment) that necessitates these variations and modifications.

Starting in 1938, independently of but coinciding with the developments at the University of Colorado, Brown University consolidated its science departmental libraries. The biology, botany, and psychology collections merged and formed the Biological Sciences division located in the Biological Laboratory. The astronomy, chemistry, engineering, general science, geology, mathematics, and physics collections became the Physical Sciences Library located in the Chemical Research Laboratory. Two small laboratory collections remained separate, administered and maintained by the division of which they were an integral part. The significance of Brown’s decision lies in the fact that they consolidated departmental libraries into two divisions located outside the main library rather than moving all of them in the main library under one science and technology division. In other words, local conditions were right for partial but not complete centralization.

Cornell University, under the leadership of Stephen McCarthy, achieved almost complete reorganization of its administration and services during the last twenty years. September 1966 marked the moving of the last outstanding science collection, zoology, into new quarters in order “to place [it] in better relationship to [its] current use.”16 With this relocation all science and technology materials are arranged in the following three large groups, each located in a different building: agriculture, including biological sciences; engineering; and physical sciences. Mathematics remains a departmental library, while collections in geology, geography, and history of science are housed in the graduate research library. This graduate research library, which opened in 1961, and the undergraduate library, which opened in 1962, form the center of all library activities. The movement toward consolidation is all the more significant because it means integrating a state university’s collection with that of a private university.

institution. It is evident from the above that divisional organization at Cornell focuses on the reader by having both subject matter and clientele as the basis of service and administration.

Cornell's great achievements are readily apparent if one studies the "Report of a Survey of the Libraries of Cornell University" prepared by L. R. Wilson, R. B. Downs, and M. F. Tauber for the period of October 1947 to February 1948. According to the report there were thirty-seven separate units, including the university library and various departmental and laboratory collections, on the Ithaca campus on June 30, 1947. Coordination, cooperation, and communication among them were nonexistent, as were central administrative control and planning. The surveyors recognized that some degree of decentralization is necessary and desirable to facilitate instruction and research and in order to provide the most useful library service. On the other hand, the multiplication of departmental collections too small to be staffed or serviced economically or which require an extensive duplication of books is unnecessary and undesirable. As new building plans mature around the campus, it should be quite feasible to merge departmental libraries in closely related fields into larger units, perhaps along broad divisional lines, such as biological sciences or physical sciences, especially if the teaching departments they serve are contiguous.

New buildings, indeed, were erected. All of the major physical units discussed above have either been newly constructed or completely remodeled since 1950.

The significance of Cornell's progress and accomplishments lies in the fact that by combining two organizational patterns (i.e., division based on subject and on clientele), it synthesized the kind of administrative organization that would assure the best service and the most conducive environment for its clientele.

Centralized subject divisional organizations, then, appear to offer possibilities of satisfying the needs, desires, and habits of scientific users while simultaneously remaining administratively and economically viable. This might be true for institutions of various sizes.

CONCLUSION

The organizational patterns of science and technology libraries result from compromises between the needs of users, as they see them, and the practical requirements of budgets and administrative control, as seen by the librarians.

Users such as those quoted above appear to have strong preferences for some form of departmental libraries. An expensive but effective compromise is administrative subject divisional centralization. This pattern offers users the various advantages of having "their own" library and offers the librarian, usually, the benefits of centralized acquisitions and cataloging and uniform policies. Duplicated records, personnel, and materials are the major contributors to the high expense of maintaining the many libraries in this type of organization.

Expenses and administrative problems can be significantly reduced with little decrease in convenience to the users by adopting the modified geographic-subject-divisional pattern of organization. Several subjects that are closely related are served at one location that is physically close to the departments involved. Examples could be an engineering, a physical sciences, and a biological sciences library.

In special situations where all science buildings are near one another one might consider complete centralization of materials and services. If acceptable to the users, it could result in an extremely economical operation.

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The Selection of Academic Library Materials, A Literature Survey

A survey of the literature of book selection in academic libraries indicates that there has been for more than a half-century a continuing shift from faculty-dominated selection to library-dominated selection. It appears likely that the trend will continue, because of the increased use of subject specialists on library staffs, the growth of the publication industry, the articulation of more selection policy statements, as well as increasingly widespread recognition of selection as part of the librarian's professional responsibility.

The purpose of this paper is to survey the professional literature as it pertains to the selection of materials for academic libraries, and especially selection with respect to who chooses titles for a collection and the criteria, guidelines, and tools utilized.

Writing in 1957 concerning the selection policies in fifty-four colleges he had surveyed, Harry Bach, then at San Jose State College, California, neatly divided the usual library acquisition routines into three basic patterns.

If libraries are classified according to the role in the selection of library materials they seem to fall into three categories—(1) Self-effacing libraries, (2) Libraries in which materials are selected by the faculty with the aid and advice of the library, and (3) Libraries in which materials are selected by the library with the aid and advice of the faculty.

1. Self-effacing libraries. These . . . are characterized by over-reliance on the faculty and a 20th Century version of a 19th Century outlook on book selection. Libraries in this group disclaim almost all responsibility for the development of the collection. [Only 5 of the 54 responding libraries are in this class.]

Mr. Lane is Assistant University Librarian, University of California, San Diego, in La Jolla.

2. Libraries in which materials are selected by the faculty with the aid and advice of the library. . . . Book selection for the university departments is left almost entirely in the hands of the faculty. . . . The librarian and library staff supplement and round out faculty buying in the various fields and select those works which are not specifically needed for the work of particular departments. They also call faculty members' attention to important publications in their field. [There were numerous examples of this in the survey of 54 libraries.]

3. Libraries in which materials are selected by the library with the aid and advice of the faculty. These libraries . . . represent . . . the avant guard of librarianship in the matter of library responsibility in book selection. . . . At Columbia, for instance, according to the annual report of the Director of Libraries, supervising librarians and department heads do the day-to-day selecting of publications for the collections under their immediate control. Although faculty members made recommendations as to items to be purchased, the library relies upon its staff members to . . . indicate significant publications which shall be acquired. (Six libraries of the 54 surveyed were in this group.)

Historically, American institutions of higher education are adaptations of European models. Colleges, in general, were modeled after English examples. Graduate universities, when they finally began to develop toward the end of the nineteenth century, attempted to imitate German models, for the nineteenth century German universities were thought to be without peer. As early as 1800, the library of the University *of Goettingen* contained nearly two hundred thousand volumes, while at about the same time (1790) the Harvard College library held a mere twelve thousand volumes. The library of the University of Goettingen, founded 1737, seems to have been the first modern "research" library in the sense that we now use the term. The first *Kurator* of the University, Count Gerlach Adolph Von Muenchhausen, was ... in a very real sense the spiritual father and the planner of the University library. Among his [major principles] were very liberal regulations for use ... regular budgets, scholarly quality, usefulness and up-to-dateness of the collection; and book selection on a planned, regular and international basis. Above all, and perhaps for the first time anywhere, Muenchhausen consciously viewed the library as an indispensable [tool] for the institution's teaching and research, as a part which could fulfill its essential role only by planned growth and regular nourishment.

This was the academic library that served as a goal for the other German institutions of the nineteenth century and ultimately for American colleges when their graduate programs started to develop toward the end of the last century.

The second librarian of that university, Christian Gottlob Heyne (librarian 1764-1812), held, according to Danton, ... the reins of book selection firmly in his own hands. For years he carried on a staggeringly voluminous correspondence with book dealers and publishers all over the world.

Danton shows statistics of the rapid growth of Goettingen University library in the nineteenth century. The other German libraries also grew rapidly during that time, finally surpassing Goettingen in the latter nineteenth century. It was not until the twentieth century, however, that an American library (Harvard) surpassed in size the largest German library.

Though the Goettingen library was, in many ways, the model for the other German universities, it was not imitated in one important factor—the strong librarian/selector—perhaps because librarians of Heyne's stature are always rare. In any case, though the goal was the same—strong, research-oriented collections, inclusive in scope and current in content—the means of obtaining them were usually different. Detailed regulations or directives were issued by the university administration governing the library in its activities, in most cases charging library faculty committees or commissions with the task of selecting library materials.

These regulations were quite often so detailed that even the ratios by which the book funds were to be distributed between the various departments and faculties were spelled out. For example, at the University of Rostock, the book funds were split among twenty-one different departments.

This then was the prevailing pattern of library organization in Germany in the years immediately preceding and during the beginning of the rapid growth of American universities. As a result—

American institutions founded before 1900
generally developed the practice of allocating most of their book funds and generally relied upon faculty and faculty committees to a greater or lesser extent. The pattern for this country was therefore set.

It is interesting to note that very shortly after the emergence of American universities and their libraries, a reaction against the faculty-developed collection set in across Germany. A rather formal system of subject bibliographers was adopted, and by 1900 virtually all German academic libraries had switched to this type of selection arrangement. Library bibliographers are still the prime selection agents in German academic main libraries, though the situation there is far from perfect. Each university, through its dozens of institutes and seminars, has developed literally scores of faculty-selected, non-circulating collections, each completely independent of the others as well as of the main library, and lacking such basic bibliographic adjuncts as a central author catalog. In most cases the book funds available to these small splinter collections total more than the main library’s book fund.

In American academic libraries today the traditional method of book selection is to allocate a sizable portion of the book fund to the various schools and departments, the faculties of which are primarily responsible for the selection of subject collections—the German system of approximately eighty-five years ago, with the difference that the responsibility for the collection administratively and legally may, and frequently does, reside in the library.

Again, unlike the earlier German model, though selection is often a faculty responsibility, there has been an almost universal trend to library staff administration of book funds, accompanied by centralized ordering and cataloging. This viewpoint has been stated and restated over the decades by various librarians. In 1937 P. B. McCrum wrote—

... the faculty then is the extensive agent in book selection as the librarian is its intensive organizer. As such the librarian owes his faculty all possible deference in the matter of their special knowledge of books. He owes himself the pleasure of providing for their needs as generously as possible and as efficiently, and he owes it to the library to make for a rounded collection, adequate as a whole, not in spurts from hit and miss buying.

In 1954 N. F. McKeon wrote—

... as collaborators with the library they (those devoted members who have a natural interest impelling them) select the books to be acquired in the subject concerned in the curriculum. ... It is not too much to say that a college library is as good as the faculty it serves.

In 1963 Guy Lyle presented the “traditional” view most elegantly in his book, The President, the Professor and the College Library.

Good libraries are the result of careful day-by-day selection in response to the express needs of departments. No single individual should be allowed to exercise undue control over the activities connected with building the library collections. Whenever a department head or individual professor dominates the selection and acquisition process, there is inevitably a disinclination on the part of other faculty members to participate fully.

The librarian has a job of leadership, but he should use his office to coordinate and inform and not to dominate book se-

9 Ibid., p. 30.
10 Ibid., p. 47.
11 Ibid., p. 34.
12 Ibid., p. 58.
lection. If occasionally he becomes impatient with what appears to be the procrastinating and slipshod methods of his teaching colleagues he should not compound their faults by taking over their selection responsibilities.

For a more positive approach to the development of . . . book collections it is obvious that there must be a working combination of administrators, faculty and the library staff. Each has his role to play and the librarian cannot delegate his part. Despite his occupation with budgets, building, and staffing, the college librarian must make the development of the book collections his major concern. It is a task in which he should receive help from the faculty and the members of the administration and the library staff but for which he must assume the ultimate responsibility. To promote this "working combination" there are certain components which a college will be compelled to incorporate into its library program. Among these are: 1.) A clear understanding of what kind of library the college is supposed to be building and for what kinds of users. 2.) A genuine and general awareness of "the different roles which different books play." 3.) An effective organization for involving the faculty and library staff in book selection. 4.) A liberal and assured annual fund with regular annual increases for book purchases.

The librarian is concerned with the book development program as a whole as well as with his specific responsibilities in selection. He will see that policies and procedures for selecting and recommending each of the various types of books—reference works, standard works, general books and special collections—are clearly formulated and made known to the faculty. He will have the final responsibility for book purchasing and this will include the right to approve or disapprove book orders which seem grossly out of line with library policy. The faculty has a two-fold responsibility in building up library resources in a subject field. The first is to keep the collection up-to-date by a careful selection of new publications and a weeding of the old. The second is to fill gaps in the collection. . . . The library staff's contribution to developing the library collection is made chiefly in the realm of general and reference books.15

In 1964 in the second edition of their textbook on book selection Mary Duncan Carter and Wallace Bonk wrote:

The various departments of schools and colleges are theoretically responsible for selection in their subject areas while the library staff remains responsible for the fields of general bibliography, for those areas not covered by departments, for special material such as periodicals and documents, and for overseeing the general development of the collection.16

A similar but more strongly worded statement appears in the May 1966 issue of CRL:

Obviously, working closely with individual faculty members (in book selection) requires considerable time and patience from the librarian but the results prove well worth the effort. There is no gainsaying the fact that the only strong research collections with national quality are those built in depth by faculty and librarians working together as colleagues.17

In summary, this point of view maintains that since faculty members know their fields well, it should be their duty to select the important books in those fields for the library.

Over the past few years a counter tendency has shown itself in the literature. This viewpoint suggests that librarians should take more initiative in collection development and the faculty less. In effect these authors would have American academic libraries, at least the larger ones, move closer to the position of the German university main library.

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17 Jack A. Clarke, and Richard M. Cooklock, "Book Selection; From Teacher's College to University," CRL, XXVII (May 1966), 224.
As early as 1934 William M. Randall wrote as follows:

This practice [the departmental allocation of book funds] although it seems theoretically to be sound has two disadvantages. In the first place, when the comparatively small gross book budget is divided between from 15 to 30 departments, the amounts assigned to each are small... The second disadvantage... is the failure to secure certain outstanding works in the various fields because the department head who passes upon book purchases sees no immediate need for them.

Thus, usually, control of the greater part of the funds for book purchases passes from the library to the department head. Yet the primary responsibility of the librarian in a college is to maintain balance in the collection and to make sure that future as well as present needs are filled. ... One possible escape from the difficulty is for the college to refrain from a departmental budgeting of its book funds and instead to leave them, or a large portion of them, in one sum under the control of the library. ... It is certainly evident that some means must be found to correct the ordinary attitude of the faculty toward the library. ... Too much influence is given at present to the individual tendencies of single members of the faculties. The result has been poorly balanced book collections with some subjects overdeveloped and some almost neglected.

The routine of [acquisition by] purchase is comparatively standardized throughout the group of colleges [studied—205]. The initiating of the purchase ordinarily comes from the faculty, who indicate to the librarian the titles to be acquired on their individual budgets. In many colleges, no check is made of this list, ... and books asked for by the faculty members are purchased so long as funds are available. Such a procedure is responsible ... for the lack of balance everywhere evident in college library collections.

The evident remedy for this would seem to consist first, in having a librarian capable of choosing books in the light of the aims of the college and with an eye to the development of its book collection as a unit and second, in giving to such a librarian wide power in the initiating of purchases from departmental funds. ... What the average college library appears to need more than any other one thing is a directing head capable of unifying its aims and translating them into books. 18

In 1940 Keyes Metcalf wrote a chapter for a book edited by Randall:

I have already stated my belief that too much reliance on faculty initiative has been unfortunate, I might also say disastrous. What then can be done? It seems to me evident that the solution should be two-fold. 1. While we should not expect faculty to do the work without aid or compulsion, full benefit of the special knowledge residing with its members should be taken advantage of and every effort made to persuade its members to suggest freely titles for purchase and also to cover systematically the fields in which they work. 2. I believe that at least in a large institution the subjects which the library tries to cover should be divided between members of the library staff. In these libraries it should be possible to find men and women who have a fair, even if somewhat simplified, knowledge of most of the broad fields. These assistants may do very little of the book selection themselves, but they should have the responsibility of seeing that there are called to the attention of the faculty members who are specialists the various lists of new books and old books that are available and that these specialists shall be almost forced to make recommendations. The staff members should then try to cover material that falls between the different lines cared for by the faculty and thus round out the work. 19

In Guy Lyle's The Administration of the College Library, Paul Bixler, librarian of Antioch College, writes in the

chapter on “Book Selection and Acquisition”:

There seems to be a good deal of haphazardness about the way in which most college library book collections are built up. The faculty initiate most of the orders in the special fields of their several departments of instruction. The librarian and library staff order as a matter of course many books of obvious importance which are not definitely in departmental fields. . . . Where there is plenty of money and bibliographical enthusiasm selection need follow no plan.20

In 1963 S. A. Stiffler states:

From a statistical point of view, the major problem in acquisition policy for smaller institutions with limited financial resources is that of selection from a constantly increasing rate of publication. . . . What should the librarian’s responsibility be in supervising the quantitative and qualitative growth of his book collection? Some librarians appear to follow . . . a simple stimulus-response buying policy. Especially is this so if general funds are limited and if the budget is departmentally allocated. This policy, insofar as it is a decision (or an implicit acquiescence) of the librarian represents too often failure to discharge the full measure of his professional responsibility.21

Again in 1963 the University of Illinois published eleven papers resulting from a Graduate School of Library Science institute held at Allerton Park on “Selection And Acquisition Procedures Of Medium-Sized And Larger Libraries.” The first, by Robert Downs, has a bearing on this study. He writes:

It is a fairly common practice in college and university libraries for the staff to abdicate responsibility to the faculty for book selection. . . . We shall be able to rely in the future even less than in the past on the faculty for aid in book selection because academic careers are being built increasingly, not simply upon teaching, but upon research and publication.

Every large library has or should have subject specialists in its organization, and others can be trained to assist in selection processes. In brief, these [bibliographical skills] are competencies that can be acquired by intelligent professional librarians who may lack extensive formal training or subject specialties.22

Another pertinent paper in this volume was contributed by Robert Orr of Iowa State University. He writes:

It seems to me that the sooner such cumbersome and sometimes troublesome methods of administering library funds [departmental allocations] are eliminated in favor of centrally administered library funds the better off all concerned will be. Moreover, in my opinion, there is a greater likelihood then of achieving a more balanced development of the book collection as a whole where funds are centrally administered.23

Many other papers, by such people as W. R. Pullen,24 Maurice Tauber,25 James Skipper,26 and R. A. Miller,27 have stated ideas and principles similar to the above.

One of the most recent statements is

26 James E. Skipper, “The Continuing Program of Book Selection and Acquisitions,” Library Resources & Technical Services, II (Fall 1958), 265.
by Robert Haro of the University of California, Davis, who reported on a survey he made of acquisition practices of seventy academic libraries in the range three hundred thousand to a million-plus volumes. Sixty-seven of those queried replied, and of these the library staff of sixty-two were engaged to a greater or lesser extent in book selection. Selection, for the purpose of his report, "excludes the selection and purchase of reference materials and occasional general items for the library." He states that

... while most academic librarians now agree that they [librarians] should engage in book selection, there is at present little agreement on selection methods and procedures. ... Most of the larger academic libraries with firmly established area studies or medium sized libraries with accelerated programs for collection development were utilizing bibliographers or subject specialists responsible for the selection of library materials.

The statistical tables accompanying his article are of some interest.

Charles Burdick, associate professor of history, San Jose State College, wrote an article in 1964 that also pertains to this subject. In it he speaks out against the domination of book selection by faculty and proposes the use of library subject bibliographers:

The responsibility for expanding the holdings is divided among 25 to 30 souls, some interested, others oblivious, and a minority intellectually dead. They order whatever happens to strike their fancy, what they selfishly desire for their personal esoteric projects, and what they find reviewed in current journals. These members of the faculty have little comprehension of the overall collection. They are current but no more. They are further limited by the research field of competence from which they seldom emerge. The product is uneven, questionable on every hand except quantity and of dubious value to future generations.

This is a strong statement, to say the least, but as it originated with a faculty member and not a librarian, it seems peculiarly pertinent here.

Another statistical survey was done by C. James Schmidt, associate librarian of Southwest Texas State College. He surveyed the twenty-one other Texas state institutions of higher education and presented the results in an article. Referring to Harry Bach's 1951 article in CRL, he assumed that whether the library staff or the faculty has the primary responsibility for selecting materials seems to hinge on whether or not the [book] budget is allocated to instructional units.

Twenty institutions replied to his inquiry, and eighteen indicated they did allocate their budget. At twelve of these, the faculty library committee was involved in the allocation of funds. The majority, twelve of the twenty, allocated from 40 per cent to 60 per cent of the total book funds, but only three of the twenty had formal collection or selection policies.

In 1963 J. H. Richards wrote an article for Library Trends on "Academic Budgets and Their Administration." It was based on a questionnaire study of more than one hundred "better known" colleges and universities; ninety-five replied. Of these, all but seventeen allocated book funds. Among the seventy-eight that did allocate, eighteen used an allocation formula. In only four institutions were the allocations of the book fund made by the faculty library committee.


Another aspect of collection development that occupies the attention of many people writing on the question of selection is that of selection policy statements. No one wrote against a selection policy; if mentioned, it is praised. In fact, the October 1953 issue of CRL had a “symposium” on the subject of acquisition policies in which can be found articles by Robert Vosper, Eileen Thornton, and Herman Fussler—all in favor of acquisition policy statements.

In 1954 Felix Reichmann questioned thirty-one university libraries on the subject of acquisition policy statements. Seven replied that they had formal written statements, while twenty stated that they had formulated, though unwritten, policies. 32

Clarence Gorchels studied this problem as it applied to colleges of education. Of eighty-six schools queried, sixty-five did not have written statements. Twenty reported they did have statements, but of these three were really statements of ordering mechanics, and seven were very short—a few brief statements of generalities; five libraries had rather complete one-page statements, and five had long (two to eight pages) complex statements. One reply was incomplete and therefore not summarized. 33

Is there a trend to be seen in the study of the literature of library selection processes? The answer would seem to be “yes,” and the initial choice of terms to describe the two major approaches to selection—(1) faculty—“traditional,” and (2) library staff—“modern”—shows the direction of the trend. As the above quotations may have shown, the bulk of the writing on this subject seems to be more and more in favor of library staff selection, at least for the majority of library items and within the framework of larger academic libraries.

Accompanying this trend is the frequently stated need to add qualified subject specialists to the staff; Cecil Byrd writes on this subject as it pertains to the Indiana University library, where ten professional subject specialists were added to the staff in the three years 1963 through 1966. 34 Another development, often noted, is the requirement to write a workable “selection” or “collecting” policy statement.

Danton sees a trend developing toward increased library selection. He quotes surveys from the late 1920’s and early 1930’s which show almost all book selection being done by the faculty. 35 He says that today, however, (writing in 1962) there exist libraries “among them some of the largest and best—in which a clearly recognized joint responsibility exists and in which members of the library staff actually perform a great deal of book selection.” 36

What then might be future developments in this field? On this subject the literature in general is vague. There is a tendency, quoted above, to use more subject bibliographers on the staff of the larger academic libraries. In smaller institutions, the courses of action that seem to be most frequently suggested are the writing of a selection policy, a closer library coordination of the book selection and collection development activities, and intelligent faculty-library staff cooperation. For example, the new Canadian university library standards state:

Book selection should be the joint responsibility of the teaching staff and the library staff. The teaching staff should be consulted about the books needed for the present and future teaching programs . . . within the defined policy for the collection

36 Ibid., p. 63.
all library staff members should suggest purchases.37

The Waples-Lasswell study, though now thirty years old, is often quoted to show that librarians can build a better collection than can teaching faculty. In this study nearly five hundred books written in English, French, and German on the social sciences were selected as "important" by a group of specialists in the field. These books were then checked against various libraries. The result shows that the Harvard library contained 63 per cent of the volumes, University of Chicago library held 49 per cent, California at Berkeley held 40 per cent, University of Michigan library had 31 per cent. These were basically faculty-selected collections. On the other hand, the New York public library, assembled by librarians and subject bibliographers, held 92 per cent of the total.38 It would be interesting to repeat this experiment today—perhaps in some field in addition to, or in place of, the social sciences.

Again, as on the history of the development of the library acquisition processes, Danton is the most detailed and far ranging in his discussion of the weaknesses of the current position and in suggesting future courses of action. In his 1963 book he lists seven flaws resulting from too great dependency on faculty selection. Among these the more serious are the resulting imbalance of the collection, the reduction of flexibility of acquisition programing, and neglect of peripheral and overlapping subject areas.39

Danton sums up his position as follows—

...the evidence and position of this study are not in opposition to faculty participa-

tion—to the fullest—in...book selection in all its aspects. Quite the contrary. The evidence is rather against the faculty's ultimate authority and responsibility, against the largely unrestricted allocation of funds to the faculty, against too great reliance on the faculty of the library, and against the uncoordinated collection building, inadvertent imbalances, and other disadvantages which result to scholarship from these practices.40

As for recommendations for the future development of collection building practices, Danton, in a lengthy article published in 1967, says:

In view of the facts and observations described..., it seems possible to offer the following suggestions and conclusions: Most Anglo American University Libraries and those operating similarly should move as speedily as possible toward a comprehensive plan of book selection by library staff specialists. Such a plan should in no sense inhibit or prevent able and willing members of the faculty from selecting books in their fields but would rather a) insure that the important books in all relevant fields are acquired, b) place authority where responsibility now generally exists (i.e. the library) and c) place book selection subject to library administrative control and supervision.41

Harry Bach concludes his 1957 article as follows:

It is the writer's conviction that the librarian ought to assume responsibility for the development of the library collection. If a librarian fails to act the part of a librarian, what is he? He is a custodian of books, a glorified research assistant, a business manager at the most... Librarians ought to consult with the faculty, librarians ought to take advantage of the special advice that is available to them, but librarians ought not to depend on the faculty to do three jobs—teach, do research and develop library collections. It is unfair to the faculty and it is unfair to the library.42

39 Danton, op. cit., p. 69-70.
40 Ibid., p. 82.
42 Bach, op. cit., p. 450.
Assessments of library services can be used for a variety of purposes, including improvement of services, management justification, and budget preparation. The Institute for the Advancement of Medical Communication has developed methods for testing an academic research medical library's ability to provide specific services. These include the ability to deliver books and journals to primary clientele, to supply answers of simple fact, to deliver documents through interlibrary lending, and to verify and correct citations. Other methods were tested for evaluation and comparison of library service policies and utilization of services by a library's primary clientele. A random alarm device was developed. The use of this device has been tested and has demonstrated that many library “statistics” can be collected randomly and provide the same information that can be acquired by maintaining “total” counts of such services as circulation and library use.

Once man learned to record his experiences, the invention of libraries was inevitable. Libraries, in an abstract sense, are man-made institutions, and one reason for their existence is to support the social organizations man defines. The object of study of natural scientists assumes that there is a regularity in nature; this regularity is “given” and although scientists search for ways to control regularity, any investigation into the purpose of nature soon moves into the disputatious realm of philosophy and theology. Any investigation of a man-made institution, on the other hand, must include in its methodology and approach the purpose of the institution if it is to produce any results that can be used to alter, improve, or justify the institutional function.

Libraries, as social entities, have only relatively recently come under the scrutiny of systematic study. Certainly these studies have contributed to the improvement of library service, but the methodology of library surveys established by the turn of the century has changed little. Lyle, while criticizing this lack of innovation, rationalizes that investigation of academic library functions has rested upon busy, practicing librarians who, for the sake of convenience perhaps, have usually taken “a greater interest in the measurable and organizational problems of finance, physical plant and equip-
ment, and operational problems than they do in some of the more intangible problems of policy, relationships, and library use.”¹ Most of us can easily agree with Clapp’s remark that the problems of the research library arise from the gap that exists between what its users require and what it can supply.² We need to find out how to evaluate, or at least make decisions about, the function of the library in the research and related programs which society supports.

This paper is a summary report of a project undertaken between July 1966 and June 1968, supported by a contract from the National Library of Medicine to the Institute for Advancement of Medical Communication “to develop methods for collecting objective data suitable for planning and guiding local, regional, and national programs to improve biomedical libraries and the biomedical information complex.” This succinct statement requires amplification to make the nature of the project clear. Unlike most studies in which the purpose is to collect data and test hypotheses, where methods are only the means to these ends, the emphasis is completely reversed in this project—it is methods, rather than data, that are of primary interest.³

**GENERAL APPROACH**

**Requirements**

In general, three considerations guided the project throughout, which served not only as a perspective within which to work but also as a check on progress and purposes. First, any survey method developed had to be applicable to academic biomedical libraries. As expansive as one might like to have been, the work could not be made applicable to all biomedical libraries, at least without some modification. It had to be recognized from the outset that attitudes of librarians and their supervisors to standardization of all kinds have too often been ambivalent. They have argued in their writings for uniform standards and practices; they have set up committees to design standard codes; and at the same time nearly every library is non-standard to a greater or lesser degree in many of its operations and records.⁴ The efforts of the project were therefore directed primarily to developing instruments that could be applied to the medical school library. Any instrument that was useful for this diverse, although circumscribed, group of libraries should be adaptable for use in other libraries. The second general requirement was that any method of data collecting should be one that could be applied in an operating library by the staff. Finally, as a corollary to the last requirement, the methods used and the resultant analysis of data must have meaning to librarians as well as to nonlibrarians, users, and administrators.

**Perspective**

The concept and the desirability for interlibrary dependence since its promulgation at the turn of the century, has all but become part of the ethic of librarianship. Yet nearly all the investigative work on libraries involves but one library or, at most, the relationship of a main library to a group of subunits with the effort to determine whether the administrative unit with its external constraints of space and finances is functioning efficiently. Rather than trying to refine old and search for new approaches to studying individual libraries, it was decided to try to define methods that would be applicable in evaluating

³ A series of articles is being prepared describing what methods were tested and how they were selected and developed. The first two articles in this series have been accepted for publication in the July 1968 issue of the *Bulletin of the Medical Library Association.*
A. Document Services for Primary Clientele

<table>
<thead>
<tr>
<th>Subject</th>
<th>Faculty</th>
<th>Graduate Students</th>
<th>Resident Staff</th>
<th>Other Clientele</th>
<th>Exceptions/Remarks</th>
</tr>
</thead>
</table>

7. Availability of “in-process” documents
   (bindery, cataloging)
   a. Documents not available
   b. Available on request

8. Circulation of serials
   a. No serials circulate
   b. Only bound serials restricted
   c. Only unbound serials restricted
   d. Only current issues restricted
   e. No restrictions

9. Circulation of non-serials
   a. ...

Fig. 1—Illustration of hierarchical arrangement for inventory of library service policies.

the national biomedical library complex as a system. Since it is not possible to
study a system as a whole, the perspective of a user of library service was
adopted. To state it another way, one of the aims was to develop methods to col-
clect data which, when analyzed, might
give at least a relative answer to the
question, “As a user of a library, what is
the probability of obtaining the docu-
ment, citation, or information I want
within prescribed limits of time and ef-
fort?” This perspective allowed looking
at library service as but one of the com-
peting units in the total information
complex. A library may identify an indi-
vidual as being one of its primary clien-
tele, but the individual may not consider
it as his “primary library” or as his pri-
mary source for access to the scholarly
record because he has an alternate
source which costs him less in time or
effort to get service. Using this approach,
there is an opportunity to compare quantitatively the service offered by li-
raries, rather than to compare libraries
in terms of such descriptive data as vol-
ume counts and budgets.

Testing

As each method was devised, it was
first tested in the two medical libraries
with which project staff members are
associated. An additional four academic
libraries were used as “laboratories.”
They were selected because of conveni-
ence to the project staff and because of
the willingness of the librarians to co-
operate in the study. Since the objective
of the project was to develop methods
rather than to collect representative
data, these libraries were used to test
the sensitivity and the practicality of the
method; that is, to determine whether
the method was adequate to demon-
strate similarities and differences among
libraries. In addition to the libraries that
served as the major test sites, many oth-
er academic, hospital, and industrial li-
braries cooperated in the field tests.

Description of Methodological Instruments

During the project nineteen separate
“tasks” or specific goals were defined. As
the work progressed, some of these tasks
were further subdivided. What has been
chosen for discussion here are those methods which are ready to be applied directly to academic and resource medical libraries and with modification to all libraries, biomedical and others.

Inventory of Library Services to Individual Users

The goal here was to devise a standarized procedure for gathering information needed to describe in detail the services a library provides to each of its user groups and to provide a framework to relate other methods of data collecting to be tested. The viewpoint adopted, as already pointed out, was that of the user; in other words, only those library activities were considered which a user could see as a direct service or as a policy which would affect his time, effort, or convenience in using the library. After much discussion and testing, fifty-three separate services were delineated. In an effort to standardize this checklist two methods were used. First, alternative policies for each service were categorized in an hierarchical array from the most restrictive to the least. For example, a library may not circulate any of its serials; it may restrict circulation of unbound issues only; it may restrict just the current issues; or it may allow all serials to circulate to faculty but not to students (see Fig. 1). Any hierarchical arrangement has to be arbitrary, but this checklist provides a convenient format to demonstrate variations in service between different user groups. Further, it provides the possibility of assigning a score to each service. A perfect score for the paragon of libraries would be 1,000. We say “possibility” because the one way to establish numerical values for such a qualitative matter as service is by agreement among a group of experts. The second method used to standardize this checklist was the development of an annotated “question-tree” for each of the services to accompany the checklist (see Fig. 2). If a survey of many libraries were undertaken, this forced-choice method of collecting information through interviews would give some assurance that the same meanings and the same purposes were applied. Although originally devised as an interview guide, it can be used by institutions for self-evaluation and for teaching students and new staff of library service policies.

Inventory of Policies on Services to Other Libraries

The checklist described above included services relating only to individuals. When one begins to include interinstitutional services in a policy checklist, the behind-the-scenes library functions cannot be ignored. Another inventory was developed listing sixty-nine possible services and covering 230 alternative policies involving interlibrary relationships. No “interview guide” was prepared for this checklist because it was assumed that anyone using it would first familiarize himself with the individual-user checklist format.

Document Delivery Test

Two separate tests have been developed.

Medical research libraries. In this method, a Document Delivery Test (DDT) is administered at a library by searching its collection for each document in a standard test sample consisting of about three hundred citations drawn at random from a large pool representing documents cited by U.S. biomedical scientists. The availability of each test document in the given library is translated into numbers that reflect how long it would take a user to obtain the different test documents from the library. A single figure-of-merit, which may be called the Capability Index (CI), is then calculated from the mean “delivery time” for all documents in the test sample. The CI for a library ranges from 100, if its users could have obtained all of the test documents in ten
minutes or less, to 0, if none of the test documents could have been obtained in less than a week. Different options for calculating the CI allow one to correct, or control, this index for (a) the number of test documents that happen to be in use within the library at the time of the test; (b) the number of test documents that happen to be in circulation at the time of the test; and (c) how long it typically takes the library to obtain documents by interlibrary loan. The CI's on repeated tests of a given library, with different samples from the same citation pool, can be expected to vary within ± 5 points in 95 out of 100 such tests. At the same level of confidence, one can conclude that the document delivery
capabilities of two libraries tested with the same sample are significantly different if their CI's differ by as much as six points.

Reservoir libraries. A special DDT was devised to determine a library's ability to relieve the National Library of Medicine of its load in providing documents. A total of 305 interlibrary loan requests received at the National Library of Medicine during fiscal 1967 were randomly selected to serve as the sample for this DDT. The procedure for performing this test is identical with the DDT at a research library, and the calculation of the CI is accomplished in the same way. A different time base must be used in scoring, however; supplying documents through interlibrary loan in a matter of minutes is obviously unrealistic.

Evaluation of the DDT. The dependability of the DDT rests on the care with which a citation pool is developed from which to select sample citations. The selection and verification of citations is expensive, and test samples can only be practically developed if they are to be applied to a large group of libraries. Selecting documents from a citation pool provides an objectivity that is not possible if recommended lists or the circulation records of individual libraries are used; the source of the citation pool determines the validity of the CI. The CI from the sample designed for resource libraries should not be interpreted as reflecting a library's ability to serve all user needs: for example, materials to support educational programs and current awareness. The CI resulting from applying the test sample for reservoir libraries measures a different function from the sample developed from citations of biomedical research papers.

Interlibrary lending. The perspective used was that of studying a library complex rather than individual libraries. One function of such a complex is interlibrary lending. Accurate knowledge of the processing time involved in lending a document to another library is useful in assessing the ability of a complex to supply documents to individual users. While many of the activities of interlibrary loans, such as mail deliveries, are beyond the control of libraries, a large share of the routines of an interlibrary loan transaction are under the direct control of a library. A method was devised to evaluate the routines involved with the lending procedures. A form was designed to accompany each request which required the recording of the time in performing actions in filling the request. Since each record was an actual time, this information can distinguish a library's "total processing time," which can be further divided into two segments: "request-processing time," ending when the library's staff has the requested document physically in hand; and "loan-processing time," starting where the request process finished and ending with the original or facsimile copy ready for delivery. Processing time, either total or its two segments, can be calculated then at any specified percentage level: for example, 80 per cent of requests are processed within x hours. This method has been carried out at six libraries, who have not found it cumbersome to collect data. This procedure can serve as a monitoring device not only to assess a library's ability to fill a request within certain time limitations, but also to provide information on the internal processing operation for exploring alternative routines which can lead to improved document delivery performance.

Citation and Information Services
One of the services all libraries provide is assistance to users by identifying
documents that may contain needed information or by supplying the information directly. Two tests were developed.

**Verifying and correcting citations.** A library’s capability for providing its users with the bibliographic tools they need to verify citations themselves (“self-use” service) and its capability for “staff-mediated” service, can be assessed by the same test. Samples of fifty incomplete or incorrect citations were selected from a large pool generated by biomedical researchers. Knowing the secondary sources that are needed to verify these citations can give an index of a library’s capability for verifying citations. The same sample can be used for a staff-mediated test in which a reference librarian is given four hours to verify the citations. With a sample of this size, the reliability and sensitivity of both tests is high enough to be acceptable for many purposes. Both are practical to administer; given the test materials and written instructions, the head of any library can administer the test and score the results.

**Simple-fact information service.** Anyone faced with the task of teaching a course in specialized reference can sympathize with the efforts made to develop a method for evaluating a library’s ability to supply answers to specific questions. The problem lies in selecting realistic questions which do not conflict with library service policies or are not merely a test of individual librarians’ abilities. A group of biomedical scientists were given published research papers and requested to indicate the questions they would need to have answered if they had done the research reported. Two sets of test questions were thus developed. Just as with the citation verification test, upper and lower limits of reliability can be established with fifty questions.

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4 Actually selected from the citation pools generated for the DDT described.

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**Library Service Records**

Each library keeps certain “statistics” for management control. These data, or at least those that are published, are descriptive and in most instances are based on a total count of circulation and a total number of reference questions answered. Administrators would like to have more data of this kind rather than less, but the cost in staff time to collect the data is prohibitive. For management decisions, information from a proper sample of a universe is as satisfactory as knowledge of the total universe. The difficulty lies in obtaining an appropriate random sample on which to apply statistical analytic methods.

A battery-powered random alarm mechanism (RAM) was developed by a commercial organization according to specifications. The RAM measures about two by three inches and can be easily carried in a shirt pocket since it is about the size of a cigarette package. The alarm, a short beep, is amplified through a small speaker that can be clipped to the shirt pocket or coat lapel, or even carried as an ear plug. The interval between alarms varies from as short as ten minutes to as long as six hours.

The use of the RAM to sample a wide variety of in-library activities has been explored, including self-service photocopying, use of the card catalog and other bibliographic instruments, library visits, utilization of library space, and provision of staff-mediated reference services. These activities were selected because they represent library services for which current measurement techniques are either unreliable or impractical for routine applications. Not investigated were applications to the technical services of a library, but the time sampling technique is an obvious application. On the basis of the experience and

7 Women’s fashions preclude such a convenient method of carrying the RAM, but it can be conveniently attached to a clip board which then can be carried and thus also serve as a means for recording the observations made.
data accumulated, it can be stated that the use of the RAM is not only practical and efficient of library staff time, but its use will make possible the collection of reliable data on some major services that, up to now, have gone largely unmeasured except in one-time studies.

**Other Areas Investigated**

One area which has been investigated extensively and is beginning to reveal an approach for additional study might be characterized as the "utilization of library services." Although most scholars have what might be identified as their primary library, several library resources are available to them except in instances of geographic isolation. In an academic medical environment this may include department collections, branch libraries, hospital libraries, and the resources of other academic and public libraries. An understanding of the relative use of alternative resources by a particular library user population is necessary if realistic planning for local and regional library services is to be undertaken. In a biomedical environment the relationship of library service is especially complex because the concentration of research and specialized health care in academic medical centers has produced specific patterns of library functions and policies.

Utilizing published data from school catalogs, data from administrative reports and records such as payroll and personnel files, and information collected through a questionnaire to a random stratified sample of a library's primary users, statistical techniques have been tested to identify some of the variations that exist in different library environments. Thus, by combining the information acquired through library service records with the characterization of a user population, a measure of library utilization can be defined. This approach in studying library utilization not only produces a powerful instrument in understanding the function of library service to specific populations, but it also provides valuable information for planning and management. How a library is used depends on many factors, some of which are beyond its control, including such things as availability of space and the improvement of other resources accessible to its users.

As with any investigative work, more problems are identified than solved. This is certainly true in this area. The aim of the study was only to test the applicability of certain data-gathering and analysis techniques on library utilization. Although the goal has been attained, and although the techniques may be useful if applied "as is," sampling plans that are applicable for academic medical libraries in general cannot yet be recommended. The wealth of data collected has demonstrated the potential and the need for further refinement.

**Further Application and Developments of Methods**

This summary report has concentrated on the work accomplished toward the development of techniques for measuring library service which have been tested and are ready for general application and use for academic medical libraries. The use of these methods for other kinds of libraries should be practical; the assumptions underlying the methods, however, would have to be reviewed to determine whether the functions tested are appropriate. The theoretical considerations, limitations, and general characteristics of each of the methods reported here will be described in detail and published elsewhere. Their practicality for assessing the functioning of library and information complexes has been demonstrated, but of equal importance is the use of these methods for research in library administration. Data collected from diverse environments can be an important resource for investigators who want to test hypotheses and conduct exploratory analyses.
RAJ MADAN, ELIESE HETLER, AND MARILYN STRONG

The Status of Librarians in Four-Year State Colleges and Universities

This study developed from the efforts of librarians at the four-year campuses and university centers of the State University of New York to gain complete faculty status. The paper is based on the replies from a questionnaire sent to 321 four-year state colleges and university centers across the United States. The compilation of statistics is based on a 57 per cent return. Status for librarians was equated with that of the academic faculties in regard to rank and titles, promotion criteria, tenure, sabbatical leave, rates of pay, holidays and vacations, participation in faculty government, and fringe benefits.

The college librarian is no longer regarded (if he ever was) as simply a keeper of musty collections of books. He has had to make his own contributions to the new methods of information dissemination and to new approaches to research and teaching. As academic requisites have risen through the years, the qualifications of librarians have had to keep pace with the demands of the academic world of the twentieth century. In a number of colleges and universities throughout the country the librarian is now, as a result, accepted as a member of the faculty, with concomitant duties and responsibilities. He teaches, conducts research, publishes, serves on important faculty committees, and often occupies an influential seat in the faculty senate.

This is true, however, of only a very limited number of schools. In most places, the college librarian has remained in academic limbo. He has

Mrs. Madan is Head of Acquisitions, Mrs. Hetler is Head of Periodicals, and Miss Strong is Head of Reference at the Library of State University of New York College at Brockport.

heeded the rapidly increasing demands for better training, greater specialization, and more versatility, but his own demands for equal status have not been accorded the same attention. The results have been what one might have expected. In those colleges and universities where equality of status is not granted, the college librarian has become a scarce commodity, a vanishing species. Despite some breakthroughs, progress toward equality of status has been exceedingly slow. Robert B. Downs, in a 1958 monograph, was able to report only little progress throughout the country in the direction of improved status.¹ Nine years later, R. Dean Galloway wrote:

A college can no more achieve excellence without an excellent faculty. In fact, it can't even build an excellent faculty without first having an excellent library. Yet the architect of library excellence—the professional librarian—has been so neglected that there is now an acute national shortage, and in most college libraries there is a crisis in recruiting qualified librarians. This

crisis is a result of a failure throughout the years to grant status and benefits to librarians that are commensurate with their qualifications and their duties.\(^2\)

As if to prove the truth of Dr. Galloway's statement, the monolithic State University of New York that same spring made an announcement of salary increases that were significantly smaller for librarians than for teaching faculties, despite the fact that State University of New York is plagued with the usual critical shortage of qualified librarians. The State University of New York system employs about four hundred professional librarians at its twenty-eight colleges and universities.\(^3\) Inequities in status exist on every campus. Administrators apply the same criteria for librarians' promotions as they do for the teaching faculty, yet they are usually considered as part of the administrative staff, without the rights and privileges of the academics. The ferment for improved status has, however, resulted in the formation of working committees at most of the campuses, and their combined efforts have yielded some results.

In October 1967 the faculty senate of the State University of New York recommended that professional librarians be granted faculty status without faculty titles but with all rights, privileges, and obligations thereof. The Senate advised its Executive Committee to prepare the necessary amendments for the policies of the board of trustees. Further, in its report of February 1968 the State University of New York faculty senate recommended that members of the professional staff of State University of New York libraries be accorded academic appointments and tenure by 1970. These recommendations were approved in to...

tal on June 12, 1968 by the board of trustees.

The writers of this article, members of the ad hoc committee on faculty status for librarians at the State University College at Brockport, New York (one of ten colleges of arts and sciences in the SUNY system) recently conducted a nationwide survey of four-year colleges and universities to determine the present status of librarians on other state university campuses throughout the country. In preparation for the survey, the following definition of "full faculty status" for librarians was formulated:

'Faculty status' entails complete equality with the academic faculty in regard to rank and titles, promotion criteria, tenure, sabbatical leave, rates of pay, holidays and vacations, representation and participation in faculty government and fringe benefits.

Only when equality in all the above conditions was met did we consider that librarians should be regarded as having "full faculty status."

**THE QUESTIONNAIRE\(^4\)**

The survey was limited to four-year state colleges and universities because the committee wanted to compare its situation with sister state institutions throughout the country. New York State four-year colleges and university centers were excluded from the study since recent data were available from a study conducted by the librarians at the Stony Brook campus.\(^5\) The College Blue Book\(^6\) and American Universities and Colleges\(^7\) were the sources used to select the list of colleges and universities where the questionnaire would be sent.

The questionnaire consisted of eight

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2. The twenty-eight colleges of the SUNY system consist of four university centers, twelve specialized colleges, two medical centers, and ten four-year colleges. The junior colleges are not included since they operate under different administrative policies.
3. The twenty-eight colleges of the SUNY system consists of four university centers, twelve specialized colleges, two medical centers, and ten four-year colleges. The junior colleges are not included since they operate under different administrative policies.
4. Composed with the assistance of Dr. Howard Clayton, now with the University of Oklahoma.
5. An informal study on status of the State University of New York librarians conducted by a committee of librarians at State University Center at Stony Brook, July 1967.
Status of Librarians in Four-Year State Colleges / 383

TABLE 1
REGIONAL DISTRIBUTION OF FULL ACADEMIC STATUS OF
LIBRARIANS IN STATE UNIVERSITIES AND FOUR-YEAR COLLEGES

<table>
<thead>
<tr>
<th>REGION</th>
<th>TOTAL NO. REPORTING</th>
<th>WITH COMPLETE ACADEMIC STATUS NO.</th>
<th>PER CENT</th>
</tr>
</thead>
<tbody>
<tr>
<td>New England</td>
<td>17</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Middle Atlantic*</td>
<td>30*</td>
<td>6*</td>
<td>20*</td>
</tr>
<tr>
<td>Southern States</td>
<td>36</td>
<td>3</td>
<td>8.3</td>
</tr>
<tr>
<td>Midwestern States</td>
<td>58</td>
<td>12</td>
<td>20.7</td>
</tr>
<tr>
<td>Rocky Mountains</td>
<td>10</td>
<td>1</td>
<td>10.0</td>
</tr>
<tr>
<td>Southwestern States</td>
<td>23</td>
<td>3</td>
<td>13.0</td>
</tr>
<tr>
<td>Pacific Coast States</td>
<td>21</td>
<td>1</td>
<td>4.8</td>
</tr>
<tr>
<td>Alaska</td>
<td>1</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Hawaii</td>
<td>1</td>
<td>0</td>
<td>0.0</td>
</tr>
<tr>
<td>Total</td>
<td>197*</td>
<td>26</td>
<td>13.1</td>
</tr>
</tbody>
</table>

* Including fourteen State University of New York colleges and university centers which were not questioned for this survey since data were obtained prior to the sending of the questionnaire.

major questions designed to establish a comparison between the academic faculty and the librarians of the same institutions. The questions were phrased in such a manner as to establish a valid comparison relevant to the above definition of "full faculty status." The following were asked:

1. Is faculty rank given to librarians, or do they have special titles?
2. What are the criteria for promotion: research, seniority, publications, advanced degrees, teaching, or work performance?
3. What is required to achieve tenure; are librarians given the same privileges as teaching faculty?
4. Who at the institution is eligible for sabbatical leave, and at what rank?
5. Is the academic appointment for faculty and librarians based on twelve or nine months? Is summer employment optional and separately compensated?
6. Are all academic vacations given to both faculty and librarians?
7. Who participates in the faculty government and who has voting rights and representation?
8. What are the fringe benefits and to whom are they given?

At the end of the questionnaire the librarians' evaluation was solicited regarding the degree of status they had attained in their own institution, and further comments were requested.

The questionnaires were sent to 321 colleges and universities throughout the United States in October 1967. Two hundred returns (62.3 per cent) were received, of which the committee was able to analyze 183, giving a return of 57 per cent. Many replies were received in the form of letters. The questionnaire was subsequently registered with the American Council on Education and assigned No. QR5544.

The last step in the investigation involved the tabulation and interpretation of the results. To make the analysis of data more efficient, a code sheet was set up and the answers transcribed into numerical values. The values were converted into IBM readable data. The data processing division at State University of New York College at Brockport assisted in analysis of the data.

FINDINGS

The statistical analysis shows that only twenty-six of 183, or 14.2 per cent, of the reporting libraries grant "full faculty status" to librarians. The low 14.2 per cent figure was a result of strict adherence to the definition of "full faculty
status.” To qualify under the definition an institution had to allow its librarians equality in all categories. Twenty-one libraries which showed slight deviations were therefore accounted as not having “full faculty status.” These libraries varied in only one of the following areas: librarians were not permitted, expected, or encouraged to engage in research; to teach credit-carrying courses; to take complete academic vacations; or to participate fully in faculty government. If these variations had been allowed, the figure for reporting libraries with faculty status would have been 25.7 per cent.

The last question of the questionnaire dealt with the self-evaluation of the respondents as to whether or not they felt they had full faculty status at their particular institution. The answers to this question were very revealing: almost two-thirds, or 63.4 per cent, of the reporting librarians consider themselves as having full faculty status, but only 14.2 per cent of the total answering met our criteria of “full faculty status.” The high percentage of librarians reporting that they had full faculty status might be attributed to the fact that librarians themselves are not aggressive in this area. They do not expect or demand equal treatment from their institutions nor do they see themselves in the same professional light as the rest of the academic faculty.

To establish Table 1, the total responses were sorted by regions to ascertain if any pattern of distribution could be detected. In order not to distort the regional results, information was included on State University of New York university centers and four-year colleges which had been obtained by questionnaire prior to this particular study.

As shown in Figure 1 a regional fluctuation did emerge. The midwestern region, represented by the largest number of responses, fifty-eight, had also the highest percentage, 20.7 per cent, of institutions with “full faculty status.” The midwestern region consisted of Michigan, Ohio, Wisconsin, Indiana, Illinois, Minnesota, Nebraska, Iowa, Missouri, North and South Dakota, and Kansas. Next followed the middle Atlantic states with 20 per cent. Six regions had representation among the librarians with “full faculty status,” while three regions, New England, Alaska, and Hawaii reported no institutions that could fulfill the established criteria. Surprisingly, there was not a single institution in the New England area reporting “full faculty status.” As one librarian from New England reported, “I have had just one fully qualified person on my staff in the

![Fig. 1—Pattern of Regional Distribution: Per Cent with Complete Academic Status](image-url)
fourteen years I have been here and lost that one to a neighboring university where status is given.”

After the tabulation of data for regional distribution was completed, an effort was made to find out if the size of the institution would have any bearing on “full faculty status.” The responses were divided into three categories according to the size of the student population. The first group consisted of colleges with four thousand or fewer students, the second of those between 4,001 to 12,000 students, and the third group included all the colleges with 12,001 students and above. Computing all variables, the result was consistent. The middle group of colleges (those having between 4,001 and 12,000 students) had the highest frequency of “full faculty status.” Examples of this finding are the state university systems of Pennsylvania, New Jersey, and Missouri, where the large universities do not have full faculty status but the four-year institutions do. The study indicated that middle-sized institutions are ahead of their larger and smaller sister institutions in giving recognition to the library profession.

Table 2 reflects the over-all comparison of librarians to faculty within the framework established by the aforementioned definition of “full faculty status.” It should be noted that among the privileges given to librarians, fringe benefits and participation in faculty government occur most frequently, with tenure, sabbatical leave, and academic titles ranking next. Faculty promotion policies, academic vacations, and rate of pay, in that order, are less often available to librarians. The area of least equality was rate of pay, with only 29.0 per cent of respondents being equal. The next lowest area was that of academic vacations, with 33.9 per cent of respondents being equal. It is interesting to note that although 65.0 per cent of librarians have academic titles, such titles do not guarantee equal privileges since only 29.0 per cent have the same rate of pay as the faculty. Almost half of the libraries reporting, 49.7 per cent, indicated that the staff is judged for promotion by the same criteria as faculty, including research and publications. However, only 33.9 per cent of librarians have equal vacations.

It is apparent from Table 3 that in 74.9 per cent of the libraries reporting, work performance is most frequently used as a criterion for promotion. To put it differently, an overwhelming three-fourths of the libraries reporting still attach significant importance to work performance. Almost two-thirds, or 63.4 per cent, of the libraries consider advanced degrees as the second most frequently used factor for evaluation of professional librarians. Seniority, which only a decade ago would have topped the list, interestingly enough ranks third in order of frequency with 43.2 per cent. A glance at the table reveals that only
TABLE 3

<table>
<thead>
<tr>
<th>CRITERIA</th>
<th>TOTAL No.</th>
<th>Yes No.</th>
<th>Yes Per Cent</th>
<th>No No.</th>
<th>No Per Cent</th>
<th>No Response No.</th>
<th>No Per Cent</th>
</tr>
</thead>
<tbody>
<tr>
<td>Work Performance</td>
<td>183</td>
<td>137</td>
<td>74.9</td>
<td>14</td>
<td>7.6</td>
<td>32</td>
<td>17.5</td>
</tr>
<tr>
<td>Advanced Degrees</td>
<td>183</td>
<td>116</td>
<td>63.4</td>
<td>29</td>
<td>15.8</td>
<td>38</td>
<td>20.8</td>
</tr>
<tr>
<td>Seniority</td>
<td>183</td>
<td>79</td>
<td>43.2</td>
<td>64</td>
<td>35.0</td>
<td>40</td>
<td>21.8</td>
</tr>
<tr>
<td>Research</td>
<td>183</td>
<td>65</td>
<td>35.5</td>
<td>83</td>
<td>45.4</td>
<td>35</td>
<td>19.1</td>
</tr>
</tbody>
</table>

sixty-five, or 35.5 per cent, of the institutions attached some importance to research and publications by librarians, which might be due to the fact that many administrators do not free librarians from their duties to work on independent research projects.

CONCLUSION

It is unfortunate, but nonetheless true, that the conditions of librarians have not changed significantly over the past decade. Even though 63.4 per cent of librarians polled reported that they had status, findings indicate that they did not. The yardstick by which the committee measured the librarians’ faculty status might be considered by some to be too rigid. This is indicated by the repeated responses from our colleagues saying “we are equal to faculty, except...” These statements suggest that librarians themselves may be somewhat responsible for their position on a low rung of the academic ladder. They are willing to settle for less than equal status, and some even seem resigned to their fate. “We are just rendering a service,” one respondent wrote. “We have sacrificed to learn, but feel that except for appreciation from alumni and students, the administration does not know we are here.” Another stated, “Librarians have been conned into thinking it is vulgar and unprofessional to care about status and rank.”

The institutions of higher education must also bear some of the blame, for they have rightfully insisted upon upgrading libraries and librarians and their qualifications, but many have ignored the pleas of librarians to be treated at par with the rest of the faculty of which they are an integral part. Neither can the academic community be absolved from the responsibility of holding librarians at an unequal and unjust level. Each time the question of equal status for librarians arises the teaching faculty creates an uproar as if the attainment of status is their sole right and extending the same privileges to others is an infringement of this right.

If librarians are to improve their own situation, they and their professional organizations must work toward gaining their proper place in the academic community. This implies that librarians must accept the fact that “full faculty status” brings with it not only equal privileges but also the obligations of research and advanced degrees which have become synonymous with faculty status. The American Library Association has not taken a strong stand on this issue. This is unlike the action taken by other professional organizations, such as the American Association of University Professors, which has played an active role in ameliorating the conditions of academic faculties. The granting of “full faculty status” by the colleges throughout the nation appears to be one of the imperative actions to be pursued in alleviating the acute shortage of academic librarians.
The Problem of Dates in Bibliographic Citations

In the bibliographic citation, date is important for two reasons: it helps to identify a particular physical book or other item; and gives an indication of the time of the item’s content or thought. For many bibliographic entries, the two purposes cannot be satisfied by one date. Examples are given to show that specification of date is often inadequate in bibliographies and library catalogs. Suggestions for improvement are offered, based largely on contributions of analytic bibliographers.

Beyond question, a satisfactory bibliographic entry gives the date of publication. Because the inclusion of such a date has become virtually automatic, it may be well to review first the reasons for it.

The Two Principal Uses of Bibliographic Dates

For one thing, the date may be necessary to identify the physical book, placing it as a copy of a certain impression. The practical consequence here may be serious, for in the case of a scarce or rare item, the date may make a great difference in value—or at least price. This physical identification is recognized also as important for the scholar. Charles Evans was only slightly too extravagant when in his famous preface he declared, "... the fact first in importance in bibliographical research is the date—always the date!" A first printing should be distinguished from a second, even though the text be the same, and as Dunkin says, "... the only difference between one issue and another—or at least the difference most easily shown—is in the imprint."

To the common reader, the bibliographic date may be helpful in identifying more precisely a particular edition of a work—an edition which may be needed to find the page number of a passage cited in the bibliographic reference. Take, as an example, an article with a footnote citation to "A. N. Whitehead, Science and the Modern World, The New American Library Edition, 1958, p. 178." In order to find the quoted passage one must use the reprint, which has a total of 191 pages; if he goes to the original edition, published in 1925, he looks in vain for the page given in the footnote, for that original had 296 pages. Therefore, he is not satisfied to obtain another text with the same words as those used by the citing author; he needs a text with the same paging; otherwise he spends considerable time in trying to find the passage referred to. The date of publication helps to identify the "correct" reprint, and the catalog (especially in a university library) should clearly indicate that date.


2 Mr. Broadus is Professor of Library Science, Northern Illinois University, DeKalb, Illinois.

3 Paul S. Dunkin, How to Catalog a Rare Book (Chicago: ALA, 1951), p. 28.
This example will serve also to introduce the second principal use of bibliographic dates. It is not enough to be able to identify a printing of the physical book. If one thinks Whitehead’s statement was made first in 1958, he is misled, for he interprets the quotation apart from its 1925 context, and its meaning becomes quite different. To prevent this eventuality, the bibliographic reference ought to do something else: indicate as accurately as possible the effective date of the material in the source cited.

This purpose has not been overlooked entirely by library catalogers. The Library of Congress Rules for Descriptive Cataloging, in referring to imprint, said, “The date generally indicates the timelessness of the subject matter.” This need for a date which has to do with content is one reason why many catalogers use the copyright date as well as—or even in preference to—the imprint date. Piercy was concise: “If no copyright date is shown, the imprint (title page) date is used.” Akers expressed the reason simply:

The important point is not when the book was printed, but when it was written and when the latest changes in it were made. The latest copyright date shows this, for books can be recopyrighted only when important changes are made in them; therefore, the latest copyright date is used... If there is no copyright date, give the date of publication; i.e., the date at the foot of the title page...

The assumption here is that the date of printing is less important than the approximate date of thought—that identifying the specific physical book is not so crucial as placing the time of the content. Esdaile states it this way:

Intelligent readers demand dates on books, and preferably in the traditional and conspicuous position at the foot of the title page. They also demand a statement of the date of the first edition of the book itself, and of the present recension of it. It is vital to them to know whether the author wrote, or revised what he had written, before or after certain events or publications. In most branches of natural science, knowledge advances and theory changes with such rapidity that a book five years old or less is out of date and if undated is a fraud.

William Warner Bishop put the matter strongly also, in his Practical Handbook: “In nine cases out of ten when a book other than fiction is looked up in a card catalog, the place and date determine the reader’s selection of a book by an author previously unknown to him.” This same concern about the significance of date is indicated by those bibliographies (found more often in science than in other disciplines) which place the year as the first element in the citation.

Though most manuals and guides for writers are not very precise on the matter of dates, at least one recognizes their importance:

A well-made bibliography... presents the following information:

(6) The date of publication (the date on

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3Jorge Luis Borges, in a story written in 1939 ("Pierre Menard, author of Don Quixote," translated by Anthony Bonner, in his Ficciones, ed. Anthony Kerrigan (New York: Grove Press, 1962), p. 45-55) imagines part of Cervantes’ novel to have been written word for word by a twentieth century author, and shows how the interpretation of certain passages would have to be changed.


the copyright page, not the one on the title page, which is changed with every printing).

In some of the less conventional systems for information retrieval, dates are given considerable importance. They are included in two of the roles in the coordinate indexing plan developed by the Battelle Memorial Institute for the Engineers' Joint Council. Role 9 provides for a date (which may include month as well as year) used to specify the time in which the operation described in the document took place. Role 0 is primarily for bibliographic information, including dates of publication. It would seem that the most important function of date in this latter role is to give the time of the discussion of the operation, or the time of the document's content rather than of the physical document per se. This date can be used in coordination to obtain, say, materials representing the thought of 1959 on the subject of uranium isotopes.

In a way both purposes—identification of the physical book or document, and indication of the time of its content—are served by Blanck in the great Bibliography of American Literature, when he goes to such great lengths to establish the publication date of an entry. The Library of Congress would seem to serve both purposes also in the unusual care which it bestows on some items. For example the small book Are Liberal Arts Colleges Becoming Professional Schools? by Columbia University, Teachers College, Institute of Higher Education, is given the date, "1958 (i.e. 1959, e1958)."

A SPECIFIC INSTANCE OF THE PROBLEM

That we need some improvement in specifications for the bibliographic recording of dates is indicated by the following example chosen from several known ones. In 1962 the New York firm of Russell and Russell issued a reprint of William John Courthope's six-volume History of English Poetry, having photographed the original pages of the 1895-1910 edition. The reprint has only a few omissions, but one of these is the original date of publication. The Library of Congress catalog card number 61-13773 gives 1962 as the date of publication with no reference to the fact that it is a reprint of a text more than a half-century old.

Though this set was cataloged by the Library of Congress according to its Rules for Descriptive Cataloging before the publication of the New Anglo-American Code, there is no reason to believe that use of the new code would have insured a better indication of the real date of the book's ideas. The new general rule for date (No. 141) is:

An imprint date on the title page of a work is always recorded. If this date is known to be incorrect, the correct date is added in brackets.

1947 (i.e. 1957)

In the case of Courthope, 1962 is certainly not known to be an incorrect date

10 See John C. Costello, Coordinate Indexing (New Brunswick: Graduate School of Library Service, Rutgers—The State University, 1966), p. 106, 107; also Battelle Memorial Institute, The Engineers Joint Council System of Roles: . . . (Columbus: Battelle, 1964 ?). The coordinate index itself has no need for a date to identify the physical document; that is placed, typically, by serial number, and may have a complete bibliographic entry in a separate file. However, the makers of the indexing system are not entirely clear on the purposes of dates as coordinating aspects. Probably this lack of precision is due to the fact that the main problem discussed in the present paper has not (yet) made trouble in the literature of engineering.
12 This omission of original date is not habitual with Russell and Russell, and in the Publisher's Trade List Annual of 1966 and following, the date for the Courthope set is given as "[1895-1906] 1962."
for the reprint (no typographical error is apparent); therefore only the date "1962" would appear in the entry. Rule 141 further recommends:

If only the original imprint date appears on the title page of a later impression or of a reprint edition, the date of the reprint is added.

1946 [reprinted 1965].

This part of the rule would not affect the Courthope set, because the original imprint date does not appear at all. The rule goes on:

If there is no imprint date on the title page, a date of publication or printing found in another part of the work or in a reference source is supplied.

So, if there were no date on the title page of Courthope, catalogers would be supposed to find one and might be led to the one most useful from the standpoint of content. That procedure is precluded, however, by the "if" clause in the rule.

The cataloging profession is by no means the only group at fault; other bibliographers also miss the mark. Notice a couple of examples, each produced under sponsorship from which should be expected the best in bibliographic citation. Each gives for Courthope the 1962 date only: The Essay and General Literature Index volume for 1960-1964 and the new Books for College Libraries. The bibliographic information for the latter was obtained largely from Library of Congress cards, so the inadequate Courthope date is understandable if not quite forgivable. If such guides are used most heavily by the very people who do not know a field well, the need for better bibliographic dating is even greater.

NEED FOR IMPROVED RULES AND PRACTICE

In truth, the user of any bibliography or library catalog simply deserves a better date for items like the Courthope History. Regrettably, most bibliographic manuals and guides for thesis writing, not recognizing its importance, are imprecise on this point (an exception, of course, is Words into Type noted previously). To quote only one of the more widely used guides: "If the date of publication does not appear on the title page, the copyright date from the following page may be substituted."19

The authors of guides probably are wise, though. It may be too much to expect of the average writer that he take responsibility for the more difficult points in bibliography. Since no purpose would be served by threatening with destruction all those who compile bibliographies or make footnote citations, it may help to throw a few suggestions in the direction of catalogers and documentalists. If an item is dated satisfactorily in the library catalog, others citing the book should be able to use the same bibliographic information. (In any case, it would help the general reader.)

Charles A. Cutter set a good pace with his rule number 274:

In cataloging reprints, Full cataloging should give the date of the original edition.

The labor of always hunting up the original date is so great that Medium cataloging may be allowed to give it when it can easily be ascertained and omit it in other cases.20

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15 Ibid.
16 Ibid., p. 204.
Though he gave as his example an original date of 1545, the work by Courthope surely would come under this rule. Unfortunately the high standard recommended by Cutter in this matter has not been followed, or even widely advocated, in recent years. The remarks of McKerrow bear out this complaint to some extent, though he was writing mainly about the books of the eighteenth century and earlier.

It may, however, be well to caution young students against blindly accepting the conjectural dates given in the catalogues of libraries. . . . Librarians have better opportunities than most people of settling such points correctly, but they are not infallible. . . .

It may be asked whether the reader cannot be expected to see for himself the effective date of a book's ideas after he has examined it or read a little of the text. There are two points to consider. First, if the reader retrieves a book from the stacks on the basis of a publication date given in the catalog, will he be disappointed that the date is, for his purpose, not the real one, and with justice complain about the quality of the cataloging in that library? Second, will the unsophisticated reader recognize from the physical evidence of the book that it is a reprint made from older plates, and avoid a false impression as to the date of the content? This in turn brings up the question of how the cataloger may recognize such a work.

**What Can the Cataloger Do?**

This problem is related to one which has long concerned the analytical bibliographer. At one time printers could not afford to leave type standing, so when the available stock of a book was exhausted, new type had to be set, and the new "edition" was easily distinguished from the old. But processes such as stereotyping and electroplating in the nineteenth century made the problem of identification much greater. How then is one to " . . . distinguish the reprints of the nineteenth-century American publisher if the latter merely reprinted from plates without so much as a reprint notice?" The solution to the problem is not easy, by any means. Blanck suggested, "It is not a question of merely describing what we see; it is rather the problem of interpreting the physical facts of the book." He made reference to Merle Johnson's broken-type theory—"a system so revealing and so simple that it must, eventually, be generally accepted."  

Johnson was quite taken with the idea of plate wear and broken type as a way of studying bibliography, perhaps making the method too difficult and also too scientific. "A good practical printer can tell more about first editions than all your experts. He knows the mysteries of make ready, stereotyping, plate making and all that. . . ." He made reference to Merle Johnson's broken-type theory—"a system so revealing and so simple that it must, eventually, be generally accepted."  

Colby gave similar suggestions on how to identify plates used in later printings of books, using as one example Joseph Conrad's *Lord Jim*. "We conclude, then, that in 1917 the old plates were secured

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Ibid., p. 129, 130.


from the original publishers and used again."^{26}

A further complication is present in our time, because of the widespread use of plates made from photographic copies of the original. Bruccoli showed some of the difficulties of describing such books, declaring that "... a rudimentary knowledge of the use of duplicate plates is requisite for anyone—critic or bibliographer—working with machine printed books."^{27} For the cataloger, it may be well to look for clues in the style of type. Often type composed forty or more years ago will differ enough from present-day styles to cause question. Surely it is not too much to ask of a professional cataloger that he be enough aware of typography to spot unusual or suspicious examples. Once the question is raised as to the true date of a book's ideas, it is possible to find evidence from the style of writing and expression, or from the dates of literature cited, or even from the content of the book itself. At least the cataloger should become expert enough to know when to seek the advice of a specialist in an effort to ascertain facts about the printing.

The date of ideas, then, is highly important in a library catalog, a bibliography, or any information retrieval system. The rules used to guide catalogers should be strengthened to reflect this importance. Catalogers and information specialists, if they are to serve their patrons—both the common readers and those who trust them for model work in bibliography—may need to learn more about bibliographical method. At least they should be able to spot a book whose imprint date is doubtful. Then a highly expert cataloger should establish the effective date of the writing.


At present, there appear to be no centers serving exclusively the technical processing needs of a group of academic libraries. A National Science Foundation funded study was begun in Colorado in February 1967 to explore the feasibility of establishing such a processing center. This article describes the background of the study and the methodology employed in carrying out the outlined research goals of the project.

About once in so long articles appear in different countries rehearsing the follies of the present system of doing the same thing over a thousand times, as we librarians do in cataloging books that reach so many libraries. But right here they all stop. There somehow seems to be an idea among certain leaders of our craft "that such a thing [cooperative cataloging] is wholly visionary, at least their failure to take any practical steps in the matter would seem to indicate such a belief." So spoke Melvil Dewey at the Conference of Librarians, October 1876, in Philadelphia.1 These sentiments have been expressed many times since, though evidently not often enough.

The concept of cooperative centralized cataloging of library materials is obviously not a recent one. One hundred and seventeen years ago Charles Coffin Jewett proposed that the Smithsonian Institution begin accumulating stereotype blocks of its cataloging and that of other contributing libraries to be used in compiling printed catalogs of different libraries, joint catalogs of two or more libraries, and possibly a union catalog of all libraries in the country.2 Although no action was taken by the Smithsonian, the proposal influenced the thinking of Dewey and his contemporaries and through their urging led to the card catalog service begun in 1901 by the Library of Congress.3

The advent of the processing center is a much more recent phenomenon. A processing center has been defined as:

A single agency which processes materials for a wider group of Libraries. This may be, among other types, a library system with its branch of departmental libraries, a central agency such as a state or county library agency, some arrangement among a group of independent library systems whereby they agree to set up and operate

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1 Melvil Dewey, Statement Made at the Conference of Librarians, Philadelphia, 1876, reported in Library Journal, I (November 1876), 118.


3 Melvil Dewey, Printed Catalog Cards from a Central Bureau. Library, 2d Series, II (January 1901), 130-34.
such a center cooperatively, or where independent libraries contract to purchase this service from some other established library.\footnote{Evelyn Day Mullen, “Guidelines for Establishing a Centralized Library Processing Center,” \textit{Library Resources and Technical Services}, II (Summer 1958), 171.}

Also as “an agency ordering, receiving, cataloging, and preparing materials for two or more libraries.”\footnote{American Library Association Resources and Technical Services Division, Regional Processing Committee, “Guidelines for Centralized Technical Services,” \textit{Library Resources and Technical Services}, X (Spring 1966), 233.} Centralized processing has been described as:

Those steps whereby library materials for several independent libraries, either by contract or informal agreement, are ordered, cataloged, and physically prepared for use by library patrons, these operations being performed in one location with billing, packing, and distribution to these same libraries.\footnote{James R. Hunt, “The Historical Development of Processing Centers in the United States,” \textit{Library Resources and Technical Services}, VIII (Winter 1964), 54.}

Although there are isolated examples of centralized processing in the early 1900’s, processing centers as such came into existence in the 1940’s, grew in number in the 1950’s, and have proliferated during the 1960’s. These centers serve public and school libraries almost without exception. The Veterans Administration Cataloging Section (an exception),\footnote{Richard H. Logsdon, “The V.A. Speeds Cataloging Procedures,” \textit{Library Journal}, LXXIII (February 1, 1948), 166-68.} the California State Library Processing Center,\footnote{Margaret W. Thompson, “California State Library Processing Center under Library Services Act,” \textit{Library Resources and Technical Services}, II (Summer 1958), 184-85.} Southwest Missouri Library Service, Inc.,\footnote{Brigitte L. Kenney, “Centralized Processing Missouri Style,” \textit{Library Resources and Technical Services}, II (Summer 1958), 185-90.} Northern Colorado Processing Center,\footnote{Mary Lathrop Eckford, “The Library Service Center of Eastern Ohio; An Experiment in Centralized Processing,” \textit{Library Resources and Technical Services}, V (Winter 1961), 5-33.} and Library Service Center of Eastern Ohio,\footnote{Council on Library Resources, “Grant to New England Board of Higher Education to Help Six-State, Inter-University Library Cataloging Project,” \textit{Recent Developments}, no. 216, released June 1, 1967; “Regional Library Technical Processing Center,” \textit{Scientific Information Notes}, IX (August-September 1967), 9.} are but a few of the many centers now operating successfully.

Though there are many centers processing materials for public and school libraries, an exhaustive literature search did not reveal centers now performing technical processing for a group of academic libraries. As book prices and processing costs continue to rise, academic libraries are showing more interest in exploring the feasibility of such centers to serve their needs. There is indication that this interest will increase, particularly if the ongoing studies demonstrate that centralized processing is a viable approach to the problems now faced by many academic librarians.

Several studies are now in progress. The Council on Library Resources has awarded grants to the New England Board of Higher Education to design a mechanized Regional Library Cataloging and Processing Center for six New England university libraries.\footnote{“College Library Center to be Created in Ohio,” \textit{Library Journal}, XCI (February 15, 1967), 726; also Lewis C. Branacomb, “The Ohio College Library Center,” \textit{The Rub-Off}, XVIII (March-April 1967).} The study is being conducted by Inforonics, Inc. of Cambridge, Massachusetts. The California state colleges have been considering the possibility of a processing center or centers for their system, as have libraries in Nevada and Hawaii. Academic libraries in Ohio are including centralized processing in a developing plan.\footnote{Elisabeth Adcock, “Centralized Technical Processes in a County Library,” \textit{Library Resources and Technical Services}, II (Summer 1958), 191-95.} The Colorado Academic Libraries Book Processing Center study funded by a National Science Foundation grant appears to
be the only other active research now being conducted in the area of centralized processing for academic libraries.

**BACKGROUND**

Colorado’s academic libraries have long been interested in the possible establishment of a center which would acquire and process book materials for the participating libraries. A special committee, elected by the Colorado College and Head Librarians Conference in April of 1941, outlined approaches to a study of centralized cataloging and other technical processes, including centralized book buying. Several reports and many favorable recommendations resulted from the committee’s efforts. Unfortunately, the timing for a project was not right, even though the ideas and the talent were present.

A study financed by the Council on Library Resources at the request of the Colorado Council of Librarians, Association of State Institutions of Higher Education in Colorado, was conducted by Donald Oehlerts in 1962 to investigate the possibility of establishing a technical processing center to serve state supported academic libraries. Direct transmission of interlibrary loans by special courier was also considered in this study. The courier service was subsequently established and presently makes a round-trip delivery from Fort Collins to Denver twice weekly, stopping at nine libraries along the way. It provides rapid interlibrary loan service among the participating libraries. A plan is now under study to extend the courier service to that of a daily run between Fort Collins and Pueblo, with a considerably increased number of participants.

In late 1965 the National Science Foundation was approached to determine their interest in funding the Processing Center project. Based on NSF’s favorable reaction, a formal proposal was prepared for submission to the Foundation. The project was outlined to be conducted in three phases: Phase I concerned with data collection and evaluation; Phase II with systems design; and Phase III, an operational center on a one- or two-year trial basis.

In October 1966 the National Science Foundation awarded the University of Colorado and the Colorado Council of Librarians a grant of $54,000 to conduct a one-year study (Phase I) concerning practicability of establishing a book processing center in Colorado. The member libraries of the Council contributed a total of $10,500 to the study. A subsequent grant of $27,500 was awarded in June 1967 to conduct Phase II of the study.

The center will initially serve the nine state supported college and university libraries, and if successful will expand its operation to include interested private academic institutions. The objective of such a center will be to order and deliver to a central point books requested by the member libraries; to catalog, classify, process, and prepare the books; to maintain appropriate records; and to forward completely processed books and catalog cards to the requesting library. Disposition of the bibliographic data generated through technical processing of titles will be examined in the opera-

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16 Principal investigators for the study are Ralph E. Ellsworth and Richard M. Dougherty of the University of Colorado libraries and Don S. Culbertson, American Library Association, Information Science and Automation Division (formerly with Colorado State University libraries).

tional study (Phase III). A record of titles processed will be forwarded to the Bibliographical Center for Research, Denver, and to the Library of Congress, for inclusion in the regional and national union catalogs. Machine readable record possibilities will be investigated during Phase III (e.g., production of a book catalog of member library holdings, issuance of periodic acquisitions lists, bibliographies). One aspect will likely include testing of LC’s MARC output as a data base.

A Description of the Study

Libraries of the nine state supported Colorado academic institutions are participating in the feasibility study. They are Adams State College, Alamosa; Colorado State College, Greeley; Colorado School of Mines, Golden; Colorado State University, Fort Collins; Fort Lewis College, Durango; Metropolitan State College, Denver; Southern Colorado State College, Pueblo; University of Colorado, Boulder; and Western State College, Gunnison.

An exhaustive search of the literature was performed prior to the study revealing a plethora of articles concerning public library and school library processing centers. There were very few references pertaining to academic library processing center studies, and no information regarding operational academic library centers, bearing out the impression that virtually nothing of a practical nature has been attempted in this area.

Phase I

Comparative operational data. Following several preliminary meetings of the investigators and staff of the nine member libraries, Phase I of the study was begun February 1, 1967. The tasks to be performed during the first phase concentrated on data collection and evaluation. A principal consideration during the initial stage is to ascertain whether a centralized operation can perform more effectively and economically than each library processing its own material. The possibility of centralization per se is not being questioned but rather the effectiveness of centralized processing given a number of libraries in an identified geographic location.

Unit cost. Calculation of a valid unit cost figure for acquiring and processing a book has been accomplished by on-site study at each participating library. Flow charts have been prepared for the technical processing areas of each library, time observation studies have been conducted, existing records examined, and diary studies performed by selected library staff members for two periods of one week each. These studies have produced sufficient data to permit reliable cost figures to be calculated.

Title duplication. The study has established the level of acquisition duplication among the participating libraries to determine whether there is sufficient duplication to warrant bulk processing. A sample drawn from the January-December 1966 American Book Publishing Record has been employed to measure interinstitutional duplication within an identifiable group of publishers and subject areas. Significant duplication of titles has been identified.

BPR sample. A systematic sample was prepared by clipping every thirtieth entry from BPR. Entries were taken from all sections of BPR, including juvenile and fiction titles. (Note: BPR excludes federal and state government publications; subscription books; dissertations; second, third, fourth, etc., printings or impressions; serials, quarterlies, and other periodicals; pamphlets under forty-nine pages). Only paperback fiction titles under $1 were excluded from the sample drawn. As the juvenile and fiction titles are not LC classified, and as this same sample will be used to determine modification of LC classification by each member library, further titles were systematically drawn from BPR—
1966 to bring the sample size to 1,206 titles. With a universe of 30,050 titles, a sample size of 1,206 titles selected randomly has proved to match the subject distribution of the universe, using the chi-square distribution test. The sample has been checked against holdings of the outstanding orders file, public catalog, shelflist, and serials records of each library to determine per cent of American imprints announced in 1966 that have been ordered/received by each library; per cent duplication of American imprint titles among the member libraries; per cent modification of LC copy by each library; and per cent of titles for which more than one copy is ordered.

**Materials processed.** The study will identify the type(s) of material which the center can process most effectively to provide a substantive contribution to the technical processing effort of the libraries involved; i.e., will the center process only current United States imprints, will it handle foreign titles (what languages), serials, or standing orders?

**Volume of processing.** The current volume of ordering and processing by category of material at each library has been calculated. The study must provide a reasonable estimate of the anticipated volume of processing which the center could expect from the libraries and structure its processing system to handle at least that level of work.

**Processing cycle time.** Four processing dates are of interest in the study. The first, date of receipt of a request in the library, will be considered as an element in the attitude survey to be conducted in Phase I. The other three dates will be used to calculate the mean (average) processing time for each library. These dates are: date the library places an order with a vendor; date the requested title is received by the library; date the processed book is forwarded to circulation.

It has been assumed that an operational center must process books at least as rapidly as the participating libraries now process materials to render effective service to each library. If it does not, why should libraries bother to send materials through a central agency, unless a reduced processing cost might offset inconvenience of delay in receiving books?

**Outstanding orders file sample.** A statistically valid sample has been drawn from the outstanding orders file at each library. Order slips were pulled in a systematic sample, reproduced on the library's available copying machine, and the order slips were then refiled. The reproduced slips were cut apart for tabulation. Tabulated results from the sample show the percentage of American and foreign imprints on order; the specific foreign languages which the library orders; the source of order—whether placed through a vendor or directly to the publisher; percentage of rush requests placed by each library; percentage of gift items received.

**Existing policies and procedures.** The present book selection policies, ordering procedures, payment methods, and processing operations of each of the libraries and business offices have been examined in detail and documented. The success of the center depends upon existing methods employed by the libraries, their compatibility of operation, and level of standardization which can reasonably be effected.

**Attitude Survey.** A study of user group needs (i.e., information and bibliographic requirements of faculty, students, and participating libraries) was conducted in November and December 1967. Their reaction to existing library services and to possible services which the library could offer in conjunction with the center was sought (e.g., a union list of recent acquisitions of the participating libraries; individual and union
book catalogs; demand or routinely supplied bibliographies; a periodical contents service; a union list of serial holdings; telefacsimile transmission; an expanded courier service).

A draft questionnaire was reviewed by the director of each participating library. Suggested revisions were incorporated in the draft which a management consulting firm has examined for content and validity of methodology. A pilot test questionnaire was distributed to a small faculty group, responses noted, and necessary changes were made before the questionnaire was distributed generally. The respondents were selected on a random basis. A follow-up interview (structured interview) with participating faculty from each institution was conducted in November and December to obtain verbal reactions and validate the questionnaire.

Completion of Phase I (with exception of the attitude survey) will provide the necessary data to construct the design requirements for the processing center.

**Phase II**

This phase of the feasibility study was funded the latter part of June 1967 by NSF. Phase II was begun in September, overlapping with the completion of several elements of Phase I, i.e., tabulation and analysis of data and the attitude survey. The project was funded through April 30, 1968. Phase II will identify and develop the systems design requirements for the proposed center. Data is being analyzed and reduced to workable systems design specifications. The study staff is now developing decision flow charts, work flow diagrams, flow process charts, forms design, organizational patterns, and space requirements for the center. A subcontract has been let with Westat Research, Inc., a management consulting firm, to construct a mathematical model of the developed system, and to test the system on an electronic computer using Phase I data and findings as variable input to the system. A realistic unit processing charge will be calculated which would permit the center to operate on a self-supporting basis. Other resulting products of the Phase II study will be an optimum system design; personnel staffing requirements; expected processing time-lag; equipment and facility requirements needed for the center's operation.

Completion of Phase II will provide all of the criteria to answer the question of feasibility (economic and operational practicability) of a processing center to serve Colorado's academic libraries. If the simulated center can process books at twice the speed and half the cost of individual libraries, Phase III funding will be requested. If, however, the simulated center processes books at one-quarter the speed and four times the cost, then the project will be dropped. Some of the spin-off activities of the study will also be explored for more productive cooperative projects.

**Phase III**

The Colorado Academic Libraries Book Processing Center will become an operational unit on an experimental basis if Phase II shows positive results. A proposal has been drafted to fund a statewide bibliographic network in Colorado. Project BEACON (Bibliographic Exchange And Communications Network) will link participants by the national teletype system, expand an existing courier service, broaden an existing area union list of serials, and establish an intercampus delivery service among other proposed tasks. The study will measure the effectiveness of the network in improving access to and dissemination of bibliographic materials and bibliographic data. User attitudes to services before and after establishment of the network will be documented. The Book Processing Center was included in the funding request with submission of the BEACON proposal in November. This article was written in September 1967. The feasibility study was completed May 31, 1968, and the final report was submitted to the National Science Foundation in June 1968. The Project BEACON proposal was not funded; however, a revised proposal requesting centralized processing funding was submitted and is now being considered. The final report will be published by Scarecrow Press and should be available in late 1968.
During a trial period of one or two years, the effectiveness of the center will be measured to determine whether the outlined requirements and anticipated results are being met. Modifications will be implemented as necessary. The working relationship and exchange of data among the processing center, the Bibliographical Center for Research, and other elements in the developing regional bibliographical network will be established during this trial operational period. An enlightening “before” and “after” picture of a processing center operation will be obtained with completion of the Phase III trial period.

Whatever the outcome of Phases I and II may be, a valuable mountain of data has already been collected which will be of benefit to the participating libraries, to all academic librarians interested in calculating unit processing costs for their library procedures, and to those libraries now considering centralized technical processing. Although all the data are not yet tabulated and all the returns are not yet in, the centralized processing concept definitely appears to be feasible for Colorado’s academic libraries.
Indexing in Source

Analogous to the Cataloging in Source (CIS) project, the Indexing in Source (IS) suggests that magazine editors assign subject headings in their publications, along with the table of contents. The subject entries should be those used by the accredited indexing services. The system should shorten the procedures of indexing institutions and establish a new mechanism of selective indexing in the libraries themselves. Objections from publishers, which were valid in the CIS project, can be eliminated in IS.

The growing popularity of periodical literature has one fundamental reason: speed. This glorious phenomenon, which complies perfectly with the idea of supersonic civilization, drives more and more readers to the periodicals desk, where they expect (1) up to date information; (2) on the most recent topics; (3) in the speediest way.

Quick services are, however, rare, and fast orientation is a matter of chance. Reference work with periodicals relies heavily on indexing and abstracting services and, again, the velocity of their operation. Most likely this is also the area where much could be done to accelerate readers' services and cut the time gap between a ready publication and its availability.

The familiar indexing journals (Readers Guide, Social Sciences & Humanities Index, Education Index, and others) are striving bravely against time. The Readers Guide is one of the fastest services in the world for nontechnical journals. These indexes are, however, very limited in scope. The RG covers only 130 journals, the Social Sciences & Humanities Index, 210, the Business Periodicals Index, 170, and they very often overlap each other.

It would be unsafe to make comparisons between similar indexing operations here and abroad. The size of a country might be a determining factor. Small countries often have centralized and very comprehensive services covering three to four hundred titles, virtually the whole output of the country, prepared by scholarly institutions (e.g., Denmark, Sweden, Hungary). Large countries, however, are forced to specialization, which often results in duplicated efforts and lack of perspicuity. Large output can hardly be handled otherwise, especially when speed is one of the principal aims to be achieved.

Nevertheless, there is a good chance to conquer time in any country by a simple operation, which could be called "Indexing in Source (IS)" after the "Cataloging in Source (CIS)" project. CIS, although it did not reach all its goals, turned out to be a durable success. Despite the agonizing years of the birth of this important experiment, a century-old dream of librarians became true. It was, however, no miracle. "A man's dreams have a habit of coming true," wrote Halldór Laxness. So let us see how another dream, the IS, could work while becoming true.

Indexing in Source suggests that any periodical, journal, or magazine should designate the subject entry of its articles.
in the table of contents or in an easily accessible separate column. The subject entries should be the same as are used by the accredited indexing services.

This sounds very simple, and, in fact, it is much simpler than the procedure of the CIS. There is no problem of getting accurate bibliographical information, particularly regarding imprint and collation, no mailing arrangement has to be made for sending the proof to the Library of Congress, nor is there waiting for its return with catalog entry to the publisher. The editor simply chooses the most suitable subject heading and prints it with, or beside, the table of contents in every issue. It is granted, naturally, that the editor, who is familiar with his subject field and who reads the published articles and other features, has competence to assign subject headings without cooperation from any library. A sort of uniformity in the presentation can be settled in a later phase of the project.

The consequences of this process have many implications. First of all, articles of the magazine need not be read by the indexer at the indexing institution. Thus one of the most time-consuming factors can be eliminated and the time gap reduced. It should be noted also that significant saving is achieved by shortening the working procedure of the indexing service, which could be used for extending the coverage to other titles.

Furthermore, IS might play an important role in building up machine indexing systems. Machine indexing is still in an experimental stage in the field of science and technology (such as Chemical Abstracts and Physics Abstracts) but no such experiment is operational in social sciences and humanities, to which IS is principally directed.

Indexing in Source offers an even more dramatic perspective at the very heart of periodical services in the library.

For demonstration only one type of library has been chosen, with the assumption that the scheme can be adopted by other kinds of libraries. The library discussed here is a middle sized senior college library, with about five hundred current periodical subscriptions. Well established statistical data prove that in such a library an average of ten issues annually will be received per periodical title which amounts to a total of five thousand issues yearly. It means also that about twenty single periodical issues arrive daily at the library (on a five-day-week basis).

If a clerical employee would spend an hour or two in going through the tables of contents of those twenty magazines and item by item enter the features on a pre-printed form under their subject headings, the readers would have the most up-to-date index ever used. Professional assistance is scarcely needed. The operation is economical from every aspect. As for the form, it seems to be convenient to use pre-punched sheets with printed subject headings. A ledger book would keep the indexed material together.

Names of persons and authors should be entered in a separate alphabetical list, though it must be emphasized that the aim of the project is principally to give fast orientation in subject fields, not authors.

The project is also versatile. One may index only part of his periodical receipts, assign special titles of journals, choose particular subject fields, or ask the teaching faculty for suggestions concerning the curricula. He may also vary from time to time the selection of material indexed. In any case, the IS gives an opportunity to have index data the very same day, or the day after, a periodical appears. This prospect appears to be remarkably useful for library patrons and might even change research schedules.

Publishers doubtless will have objections, as they did in the case of the CIS. But in general they were willing then to cooperate, after the officers of the Li-
Library of Congress traveled far and wide, visiting thirty-eight cities and twenty-one states in order to persuade them.¹

R. B. Eastin stated² that the CIS project would have much more appeal to the publishers if it would result in increased sales. Although the project resulted in substantial savings to the libraries, it was not possible to estimate how much of this saving might have been reflected in additional book purchases.

As far as periodicals are concerned, however, we are able to present some facts to the publishers, which might affect their financial interest.

1. It has been ascertained by many librarians that if a periodical is not indexed, it “just doesn’t exist” for a considerable number of library users.

2. If the time gap between the publication's date and the availability of the index is too wide, the reader very easily loses interest in that particular journal.

These two factors might influence a library in its selection as to which journal should be subscribed. Advertisers, naturally, also prefer those publications which are read by many people soon after appearance. Advertising is something always respected by publishers.

**Summary**

Analogous to the Cataloging in Source project, the Indexing in Source plan promises significant gain in speed of various processes. This is obvious at the indexing institutions and by establishing a new mechanism of indexing in the libraries themselves. Objections which were valid in the CIS project can be eliminated in IS. The project also seems to be advantageous financially for indexing services and publishers alike, and also beneficial for the research worker. The flexibility of the plan, as to putting the publishers' contribution and the libraries' indexing on selective basis, makes the Indexing in Source easily adjustable for all parties involved.

A basic necessity, however—the publishers' participation—will probably be most easily elicited by our professional organizations, such as LC, ALA, CRL, and the American Standards Association.

² Ibid.
The Librarian in Catholic Institutions

This paper attempts to examine the place of librarians in Catholic institutions of higher learning by providing answers to questions about the ratio of professional to nonprofessional staff, the presence or absence of staff associations, the involvement of professional staffs in library administration through staff meetings, and the librarians' status and salaries. The search is based on a questionnaire, mailed to the head librarians of Catholic colleges and universities in the United States enrolling more than one thousand students. The necessary statistical data on the size of the libraries, the number of students they serve, and various standards applicable to the academic libraries were obtained from published sources. The paper presents, compares, and analyzes the data.

This study attempts to provide a profile of personnel practices in the Catholic colleges and universities in the United States. It reports such matters as participation of the librarian in staff meetings, the size of the student body he serves, his involvement in the library administration, and his remuneration in comparison with that of the teaching faculty. It is based primarily on a questionnaire mailed in the summer of 1966 to the library directors of institutions involved, but also on published statistical data. The questionnaire consisted of five parts. The first part examined the number of students enrolled during the academic year 1965–1966; the second part questioned the number of professional, subprofessional,1 clerical, and student assistant positions; and the remaining three parts dealt with such subjects as staff associations at the libraries, possible existence of staff meetings, value of meetings, and professional staff member's status and salary.

The selection of libraries to which the questionnaire was mailed was based on two sources. Institutions enrolling five hundred full-time students or more were chosen from the Catholic Colleges of the United States of America 1952-53 by Rev. James F. Whelan, S.J. The 1965 Official Guide to Catholic Educational Institutions (hereafter called the Official Guide) was used for selection of colleges and universities with enrollments of one thousand students and more. The Official Guide was also utilized for comparison of growth in enrollment in colleges selected from Father Whelan's source. Colleges where the enrollment during the intervening years had not reached the figure of approximately one thousand full-time students were dropped from the list.

The resulting list consisted of seventy colleges and universities. This represented 33 per cent of 211 Catholic institutions of higher learning in the United States listed in the Official Guide. Of the seventy library directors, thirty-one were directing university libraries, and thirty-nine were managing college li-
libraries. Twenty university librarians and thirty-six college librarians filled out and returned the questionnaire. These fifty-six libraries, which are the subject of this study, represent 26 per cent of all four-year colleges and universities listed in the Official Guide, or 80 per cent of all Catholic institutions of higher learning in the United States with enrollments of one thousand students or more.

**Review of Fifty-six Libraries**

In order to assess properly the information in the subsequent paragraphs, a brief preliminary review of the fifty-six libraries involved in the study may be given. Of these libraries, forty serve student bodies of from 1,000 to 2,500 students, eight have student bodies of up to 7,000 students, and the remaining eight university libraries serve 7,001 to 13,000 students. Their book collections range from a book stock of 35,000 volumes to an impressive 650,000 volumes. The same numerical diversity is noticed in their current periodical subscriptions, ranging from 280 to 4,540 titles. The total number of staff administering these collections ranges from 3 to 127 persons, and the range of professional staff extends from 2 to 37 librarians. The percentage of professional personnel in relation to the total number of staff also varies. As little as 9 per cent of the staff represents the professional group in one library, but on the other end of the range, 61 per cent of the staff is professional.

Some of the above statements require a closer look and additional analysis. Regarding the book stock, twelve libraries, of fifty-five for which the figures were available, hold between 35,000 and 52,000 volumes; twenty libraries have 53,000 to 99,000 books; thirteen claim 100,000 to 200,000 volumes; and eleven own more than 200,000 volumes. While all of the libraries meet today the archaic 1931 American Library Association standards holding that a collection of 14,000 volumes is satisfactory for a four-year college, several do not meet the newer ALA (1947) standards requiring


**TABLE 1. 56 Catholic College and University Libraries**

<table>
<thead>
<tr>
<th>STUDENT ENROLLMENT (FULL-TIME EQUIVALENT)</th>
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</thead>
<tbody>
<tr>
<td>1,000–2,500</td>
</tr>
<tr>
<td>-----------------</td>
</tr>
<tr>
<td>Number of institutions</td>
</tr>
<tr>
<td>Range in book holdings</td>
</tr>
<tr>
<td>Range in number of periodical titles received</td>
</tr>
<tr>
<td>Range in number of total staff, including students (full-time equivalent)</td>
</tr>
<tr>
<td>Range in number of total staff, excluding student help</td>
</tr>
<tr>
<td>Range in percentage of total professional staff</td>
</tr>
<tr>
<td>Range in percentage of professional staff, excluding student help</td>
</tr>
<tr>
<td>Number of institutions having following percentage of professional staff:</td>
</tr>
<tr>
<td>9–20%</td>
</tr>
<tr>
<td>21–30%</td>
</tr>
<tr>
<td>31–40%</td>
</tr>
<tr>
<td>41–61%</td>
</tr>
</tbody>
</table>

*Student enrollment figures and information on staffs are based on the questionnaire sent to librarians of these institutions. Book holdings and periodical titles received are taken from *The Official Guide to Catholic Educational Institutions*, 1965.
a minimum collection of 40,000 volumes. The most recent ALA selection guide, calling for a minimum of 53,000 titles for an institution granting a four-year degree, is not met by a dozen libraries. It is to be noted that this 1967 guide indicates the minimum number of titles; the number 53,000 would certainly be increased if it were translated into volumes. Some of the libraries, on the other hand, exemplify a remarkable degree of achievement in book collection development considering the difficulty in obtaining adequate funds. The number of periodicals subscribed to by the institutions also varies greatly. Of fifty-five libraries in the tabulation, thirty receive fewer than six hundred periodical titles, and twenty-five get between 604 and 4,540 titles regularly. There are no ALA minimum standards available for a desired size of periodical collections or number of periodical subscriptions, but the Classified List of Periodicals for the College Library by Ira E. Farber (4th edition) lists 601 periodical titles for college libraries.

The number of students per librarian represents another interesting field for comparison (see Tables 2 and 3). In the smaller libraries, with the enrollment of 100 to 2,500 students, the median number of students per librarian is 286, ranging in different schools from 93 to 713 students per professional librarian. In college libraries serving over 2,500 students, the librarian-student ratio ranges from 1 librarian to 167 students up to 1 librarian to 1,380 students, with the median at 506 students per librarian. The median for the librarian-student ratio for all libraries in the study is 1 to 330.

<table>
<thead>
<tr>
<th>TABLE 2</th>
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<tbody>
<tr>
<td>SIZE OF TOTAL STAFF IN 56 LIBRARIES</td>
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</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Libraries</th>
<th>Employees*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serving 1,000-2,500 students</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>3-12</td>
</tr>
<tr>
<td>11</td>
<td>15-20</td>
</tr>
<tr>
<td>14</td>
<td>21-30</td>
</tr>
<tr>
<td>8</td>
<td>31-48</td>
</tr>
<tr>
<td>Serving 2,501-13,000 students</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>6</td>
<td>21-30</td>
</tr>
<tr>
<td>6</td>
<td>53-66</td>
</tr>
<tr>
<td>3</td>
<td>90-127</td>
</tr>
</tbody>
</table>

* Full-time equivalent and including student assistants.

It must be realized that the method used above for securing a librarian-student ratio would be better replaced by the ALA’s recommended method, which identifies a librarian’s service in unit loads, but the use of such a system was impossible because unit loads are generally not readily available. The ALA method assigns one, two, three, four, and five units for each lower division undergraduate student, upper division undergraduate student, honors student, graduate student, and faculty, respectively. In order to indicate at least how this method works in the present situation, it will be applied to two libraries in this study by basing most of the missing data on the published sources, and employing some less important but necessary assumptions.

<table>
<thead>
<tr>
<th>TABLE 3</th>
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<tbody>
<tr>
<td>SIZE OF PROFESSIONAL STAFF IN 56 LIBRARIES</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Number of Libraries</th>
<th>Professionals*</th>
</tr>
</thead>
<tbody>
<tr>
<td>Serving 1,000-2,500 students</td>
<td></td>
</tr>
<tr>
<td>7</td>
<td>3</td>
</tr>
<tr>
<td>10</td>
<td>4</td>
</tr>
<tr>
<td>11</td>
<td>5</td>
</tr>
<tr>
<td>8</td>
<td>6 or 7</td>
</tr>
<tr>
<td>4</td>
<td>8-11</td>
</tr>
<tr>
<td>Serving 2,501-13,000 students</td>
<td></td>
</tr>
<tr>
<td>2</td>
<td>2 and 3</td>
</tr>
<tr>
<td>4</td>
<td>5 or 6</td>
</tr>
<tr>
<td>4</td>
<td>10-15</td>
</tr>
<tr>
<td>5</td>
<td>20-28</td>
</tr>
<tr>
<td>1</td>
<td>37</td>
</tr>
</tbody>
</table>

* Full-time equivalent and including student assistants.

* Books for College Libraries: A Selected List of Approximately 53,400 Titles Based on the Initial Selection Made from the University of California’s New Campus Program and Selected with the Assistance of College Teachers, Librarians, and other Advisors, prepared under the direction of Melvin J. Voigt and Joseph H. Treyz (Chicago: ALA, 1967).
In the first example, library A has 1,215 undergraduate students and sixty faculty members, who are served by five professional librarians. Assuming that 500 of the students are upper division undergraduate students and the remainder are lower division undergraduates, the total service load for library A would be 2,015 units. This number of units places the library in Class 3—College Libraries—of the ALA’s Classification and Pay Plans (to which the majority of colleges in this study belong). According to these minimum standards, library A should be staffed by a chief librarian and three professional assistants for the first 800 units, and one more professional librarian for each additional 500 units or fraction thereof, or a total of six and one-half professional staff members. In the second example, library B has 6,100 students, 1,000 in the graduate program and 5,000 in the undergraduate schools, and 480 teachers, who are served by thirty-seven librarians. The total service load for this university library would be 13,500 units, which would place it in the Class 6—University Libraries—of the ALA’s Classification and Pay Plans. The University Libraries Class 6 requires, in addition to the position of the chief librarian, twenty-two assistants’ positions of professional grade for 10,000 service units, and one more assistant’s position of professional grade for each additional 500 units. According to this requirement, library B needs thirty professional librarians to satisfy the ALA’s minimum standards.

The libraries in this study fall, by ALA classification, either in Class 3, Class 4, or Class 5 for four-year degree-granting institutions, or in one of the first six classes for the university libraries, as outlined in the Classification and Pay Plans. The minimum service load for the Class 3 libraries is 1,500 units, which requires four professional staff members. Table 3 reveals that there are nineteen libraries with fewer than five professional librarians, which is below the minimum standards. The larger libraries are, by comparison, staffed better, and some of them, as was shown in the case of library B, may even surpass the ALA’s 1947 minimum standards.

Concerning the ratios of professional to nonprofessional personnel in libraries, one finds no generally accepted standards. The ALA proposal regarding such ratios was 40 to 60 per cent. Robert B. Downs concluded that “if more than one-third of the entire staff is composed of professionals, the probabilities are that they are performing a substantial amount of clerical routines and at the same time neglecting opportunities to assist readers in doing reference and research, to build up the resources of the library, and to carry on other distinctly professional work.” But most of the libraries in this study favor nonprofessional staff which exceeds the professional-to-nonprofessional staff ratios of both proposals. While “the median for 140 libraries of private colleges with enrollments of one thousand or more is five professional to six and one-half nonprofessional, including student help in full-time equivalent,” the median for the fifty-six libraries, under the same conditions, is five professional to nineteen nonprofessional employees. Thus, of the fifty-six libraries under discussion, at twenty-three institutions the percentage of professional librarians on the staff is below 21 per cent; at fifteen libraries the percentage of professional librarians is 21 to 30 per cent; at twelve libraries

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7 Lyle, op. cit., p. 181.
8 When student assistance was reported in hours, 2,000 hours counted as one full-time employee. It is doubtful that the ratio of professional to nonprofessional staff could have changed so much during a period of five years.
the trained librarians form 31 to 40 per cent of the staff; and at the remaining five libraries the range of the ratio of professional to nonprofessional personnel is 41 to 61 per cent of the total staff. It would appear that in the majority of fifty-six libraries in this study nonprofessional duties are delegated to those who can do the job cheaper and perhaps better, and that the professional librarian, hopefully, can be involved in more complex and rewarding areas of librarianship.

**Staff Associations**

Some of the libraries surveyed are large enough and employ a sufficient number of personnel to make a staff association feasible. But formal library staff associations exist at only three (4.2 per cent) institutions considered in the present survey. Two of the libraries with formal staff associations are among the largest ones in the study, but the third library, reporting an informal staff association, employs only ten people. None of the three library staff associations above publishes a newsletter, although of the fifty-six librarians who answered the questionnaire, two reported that a newsletter was published at their libraries. Another librarian indicated that his library "used to publish a 'log' but has discontinued it." One respondent replied that while there is no staff association at his institution, librarians nevertheless belong to the American Association of University Professors and other professional organizations.

**Staff Meetings**

Replies to questions on the subject of staff meetings are more varied and interesting. To the inquiry, "Do you hold staff meetings?" forty-six of the librarians (82 per cent) answered affirmatively. Regarding the frequency of such meetings, the following pattern emerges: eighteen head librarians (39 per cent) hold staff meetings monthly; at eleven libraries (24 per cent) the meetings are held two or three times a year; and ten institutions (22 per cent) hold staff meetings occasionally, irregularly, periodically, or when needed. Some libraries, on the other hand, have staff meetings more frequently. Four institutions (9 per cent) hold them three times per month; at two libraries (4 per cent) employees meet weekly; and at one library (2 per cent) the meetings are convened daily. Clarifying statements were added to some of the answers, such as "rarely hold a formal meeting"; "we discuss daily"; "monthly, have coffee together daily"; "once a month and whenever need arises"; "nominally once a month, actually less frequently"; "at least monthly; not often enough."

In answer to the inquiry concerning participation in staff meetings, the most frequent reply was that the library director and all professional staff take part in the discussions. Such is the case at twenty-six (56 per cent) of the surveyed libraries. All full-time personnel, professional and nonprofessional, meet at twelve (26 per cent) of the libraries. The directors of four (8 per cent) libraries report meetings held between the library director and the heads of all departments, and meetings between the library director and other professional members. The remaining four (6 per cent) respondents follow their own arrangement regarding staff meeting participants: director with professional staff, and director with clerical staff; director with professional, subprofessional, and some clerical staff; director with professional and subprofessional staff; and director with staff socially, director with heads of departments officially. There are some other arrangements, when at times clerical staff, and even the president of the college, also attend library staff meetings, or nonprofessional personnel is invited when needed for information. Some other comments are: "meetings with department heads are in-
formal”; and “department heads also have meetings with their subordinates.”

The replies to questions on the value of staff meetings indicate that the librarians are generally favorably inclined toward holding staff meetings. Thirty-seven (66 per cent) library directors answered affirmatively to the inquiry whether staff meetings help in decision making. That staff meetings furthermore improve library employee morale is obvious from the even higher percentage of affirmative answers, forty-one (73 per cent) stating agreement. The directors of forty-five (80 per cent) libraries thought that solutions to many library problems are ironed out at staff meetings. Additional questions examined the extent of staff participation in administration of the libraries involved: forty-four (78 per cent) head librarians agreed that staff suggestions are listened to and that they influence policy decisions, while only two (3 per cent) head librarians agreed with the proposition that all policy decisions are made by the library director, and are not influenced but rather followed up by the staff.

In space provided some librarians include short comments on the preceding group of questions. Regarding “staff morale,” one respondent said that his library has no problems. Another commented that solutions to library problems are not ironed out, but rather “solutions are begun to be found.” Some policy decisions are influenced by the library committee, by the university Senate, by the academic vice president, or by a combination of the above bodies. One librarian commented on the power of the library committee, which consists of the librarian, who presides, and of all department heads and administration representatives. Harmony and teamwork are results of staff meetings, thought another library director: “It is our practice to point out various problems to the staff, have them discuss the problems, and through the discussion arrive at a solution, which is then issued if it affects users, or represented, in case it affects workers,” was another comment. “We are able to discuss problems, so all will be informed”; “communications is probably the most important benefit of staff meetings”; and similar comments were expressed by several other librarians.

The final question regarding staff meetings tried to establish why they had been discontinued in a few libraries. A librarian with eight employees on his staff replied that formal meetings were discontinued because of the small size of staff. An intention to revive staff meetings, however, was planned by another library director who discontinued the meetings because of the small staff. The reason for discontinuation of official meetings in another library was the difficulty of getting personnel together. Individual conferences and person-to-person contact was found more effective by a respondent with twenty-four members on his staff.

LIBRARIANS’ STATUS AND SALARIES

The first issue in the questionnaire regarding librarians’ status in college or university libraries examined the position of the head librarians. To the inquiry as to whether or not the library director holds the rank of dean, faculty rank, or other, five library directors (9 per cent) replied that they hold the rank of a dean or equivalent; forty-four (78 per cent) said they hold faculty rank; two (3 per cent) hold faculty status; and five (9 per cent) hold no rank. In thirty-nine libraries (70 per cent) librarians hold a faculty rank; seven (12 per cent) of college or university administrations give faculty status to librarians; and at nine (16 per cent) institutions librarians hold no rank. In reply to a query concerning when faculty rank was first given to librarians, this study established that at seven libraries the professional personnel held faculty recognition “always”; three institutions gave the librarians fac-
ulty status in 1940's; twelve schools in the 1950's; at nine institutions librarians obtained faculty status recognition in the 1960's; and one institution had recognized such status "for a long time."

The terms "faculty rank" and "faculty status" are often used, in the library literature, interchangeably.9 It is not unlikely that some of the respondents did the same. Thus it may be reasonable to assume that some of the thirty-nine directors reporting faculty rank for librarians meant it to be faculty status. By the same reasoning, it would seem wrong to assume that librarians at the nine institutions reporting no rank for the professional librarians were classified as clerks, but rather that they too most likely hold academic or faculty status. Be this as it may, if one adheres to the directors' replies and uses the terms "faculty rank" and "faculty status" interchangeably, one can record forty-six (82 per cent) institutions recognizing librarians as academic personnel.

By reviewing the faculty status of professional library personnel, it becomes evident that at seven institutions only the library director is given faculty status, to the exclusion of other professional librarians on the staff. Another university grants academic status to the director and also the heads of various library departments. The study further indicates that neither the size of the student body nor the number of professional librarians on the staff has any bearing on the academic status of librarians. At seven libraries, for example, where faculty rank is granted to library directors, the student body ranges from one thousand to ten thousand students, and the number of professional librarians from two to twenty-eight.

Only a few individual comments were given by the respondents in regard to faculty status. Some examples of these are: "faculty rank [is] not equivalent to teaching faculty"; and "faculty rank for all, but as administrators."

In examining the issue of sabbatical leaves for librarians, it should be noted that because of a typing error only twenty-two library directors, heading the largest libraries, were questioned on this subject. Since sabbatical leaves for librarians, and often for the teaching faculty, especially in smaller schools, are of relatively recent origin, it is remarkable that professional librarians at four (18 per cent) colleges or universities in the study are entitled to sabbatical leaves, and one additional institution grants such leaves only to the library director. Of institutions granting leaves, one librarian reported that leaves are not granted at regular intervals. The directors of libraries where sabbatical leaves are not granted supplied such comments as "sabbatical leaves are under negotiation now"; "not yet for librarians"; "the teaching faculty sabbaticals start in 1966/67, for librarians not yet"; "no precedent has been set; no policy."

The subject of librarians' salaries was the last substantive question in the survey of the fifty-six Catholic college and university libraries. According to the ALA's Standards for College Libraries, "the salary schedule for librarians should be the same as for teaching members of the faculty."10 Given two options in the questionnaire, (1) "the salaries of librarians are less than the salaries of the teaching faculty," and (2) "the salaries are approximately the same as the salaries of the teaching faculty," twelve respondents (22 per cent) answered yes to the first statement and thirty-two of the library directors (60 per cent) said yes to the second statement. Eight (15 per cent) indicated that the salaries were the same as for teachers. One librarian (1.8 per cent) stated that the

9 "Lyle, op. cit., p. 192-93.

10 "Standards for College Libraries," CRL, XX (July 1959), 276.
salaries were possibly higher. Of fifty-six respondents, three either did not answer the question or said that the salaries were impossible to equate. Thus the percentages indicated above are based on fifty-three institutions.

Many comments were made on the subject of salaries. Here are some from librarians who stated that salaries are the same for librarians and teachers: “Our professionals have the same rules, exactly, as the teaching faculty. Their promotion, tenure, etc. are identical. However, since teaching faculty is paid on ten months basis, and the library faculty on a twelve months basis, there is an obvious difference in salaries. Proportionately, however, they are about equal.” Somewhat similar is the comment of the next librarian who said “the same . . . but librarians have about seven weeks vacation, while teachers have twelve weeks.” Another librarian commented that “graduates of library schools are appointed with rank of instructor and salary [is] that of beginning instructor.” Regarding the percentage increase of salaries, one librarian stated that “salaries are the same . . . with the same percentage increase, because of more exacting schedules and summer employment.” Finally, in a library where librarians’ services are contributed, the corresponding estimate for salaries is the same as for teaching. From the institutions where librarians’ salaries are only approximately the same as those of the teaching faculty, various explanations can also be cited: “The salaries are slightly lower,” said one library director, “and the teaching faculty can supplement the income by teaching summer courses, while librarians are all on eleven-month contracts.” About the same reasoning is evident in this comment: “The salary is annual instead of for nine months.” One director said that in some cases the salaries are higher than the faculty salaries in the same rank. Only two comments were given by respondents from institutions which reported librarians’ salaries to be lower than teachers’ salaries. The first one stated “not much less,” and the second commented “ninety per cent of equivalent.”

CONCLUSION

Several significant observations and conclusions can be derived from this study. Judging from the large number of libraries where professional librarians help the director to make decisions and to solve problems, and contribute suggestions for better management of the libraries, we may well conclude that most colleges and universities in this study adhere to the democratic form of library administration. This attitude of sharing authority seems to be in keeping with the modern trends. Another interesting observation resulting from the study is the fact that sabbatical leaves, only recently granted to some individuals in the library profession, are now established at 18 per cent of the libraries queried on the subject. Similarly, the prediction that head librarians in college and university libraries will in future receive the status of dean is already reality in nine per cent of institutions participating in this study. Further, the number of non-professional staff members has increased at most of the schools in the study, giving the professional librarian, supported by additional clerical help, much more time to devote to professional duties.

The reader can make a number of additional comparisons and observations, some encouraging and some discouraging, from the data in the study. It should be noted, however, that this study involves Catholic colleges and universities of a certain size only, and thus provides to a large extent in-group comparisons or comparisons of this group of colleges to various standards. A broader study, involving perhaps the same number of similar institutions, but with different administrative outlook and financial support, would provide a much broader picture of librarians’ involvement in higher education.
Library Instruction for the Undergraduate

An effort was made to determine the current state of library instruction to undergraduates in American colleges. Literature was searched and a questionnaire was distributed to two hundred colleges. As was expected, dissatisfaction with the status quo is almost universal. A wide range of practices is reported, with the most promising future appearing to lie in the area of programmed instruction and audiovisual aids to teaching.

In reference or circulation service to college students, it is impossible to escape involvement in the frustrations of the typical college freshman. He may get lost in the maze of subject headings, cross references, or involved corporate entries at the card catalog, wandering finally into a wilderness of books, starving mentally in the midst of plenty. Reference librarians are usually only too glad to give assistance. They point out that In the Steps of the Pharaohs does indeed precede Instruction in the Use of . . . and explain the principle of word-by-word filing in the card catalog. They explain the use of encyclopedia indexes. They demonstrate the use of periodical indexes and abstracts. Yet the sobering realization comes that for the student who seeks assistance, there may well be nine others failing to use the library competently who do not ask for help.

In order to determine the current extent and effectiveness of methods of library instruction, the present author conducted a study on this topic during the summer of 1965. The periodical literature and theses from 1950 to 1965 were extensively examined. A brief questionnaire was sent to two hundred colleges selected from American Universities and Colleges. These colleges were predominantly in the 500-5,000 enrollment bracket. Some attention was paid to geographic distribution: northeastern, 33; southeastern, 33; south central, 29; north central, 61; western, 42; Canadian, 2. The distribution was 119 private colleges to 81 state owned. There were 157 replies to the two hundred questionnaires, making a 78.5 per cent response.

Some 126 of the 157 respondents (81 per cent) indicated that some form of library instruction is given. The three-point evaluation scale on the questionnaire (1. ineffective; 2. of some value; 3. of great value) was not considered a significant item in the tabulation of responses, for librarians tend to be conservative. Most of the respondents circled “of some value” in rating each type of instruction. The comments on the responses to the questionnaire were far more eloquent than the unadorned figures. Ninety-seven of the respondents added evaluations of their instruction programs. Seventy-two of these indicated that their programs were failing to meet the need. Their comments ranged from the one word “anemic” to long, articulate letters describing the glaring...
need: lack of staff, lack of time, lack of money for experimentation, lack of cooperation and interest from the faculty and administration. Excerpts taken from their comments provide the random sampling which follows.

- I think our program and most programs in institutions of rather large enrollment stinks. Programmed instruction is, I think, a possible way to accomplish something here.
- The greatest problem is to reach the students who have the greatest need and not bore those who are acquainted with what we have to offer.
- We don’t give instruction because I don’t believe in it. (The only completely negative response.)
- When orientation in the use of library materials on a particular subject is prepared with the cooperation of the teacher of that class, and students are aware that an assignment utilizing the materials is impending, I am convinced that there is an immediate effectiveness. Transfer of skills to other subject fields seems not to happen. The fifty minutes of initial freshman orientation assigned to the library appears totally useless except that some of the timider freshmen are herded into the library.
- We would like to report that we give adequate and effective instruction, but unfortunately our staff is too small and too busy to undertake any sort of formal instruction program.
- Our plan was to give an Orientation lecture, part slides and part lecture, to the new freshman and then early in the second semester give a very brief tour of the library with a lecture in the humanities library by one of the librarians there on the PMLA and other literary tools in research. In spite of all efforts it is still optional and first semester this year nothing was done. We think the slides and lectures are quite helpful to some of the students.
- The lack of library instruction is very obvious to those of us who man the service desks. . . . Hardly a day goes by that we don’t have to send people back to the card catalog to get the complete numbers.
- I have prepared a colored slide lecture which is, basically, a tour of the library and an introduction to the card catalog, classed books, periodical indexes, and collections. The faculty is notified that this lecture is available; they arrange for their classes to see-hear the lecture if they wish. Not many so choose. We are a 24:1 faculty-student ratio, enrollment 2,800, 3% librarians. It’s pretty much sink or swim. Faculty is excellent, but no time to help students. They either know how already and get a good education, or are lost.

Historical data for background study was best presented in concentrated form in a 1952 thesis by Mary Case Marquis. Two earlier theses, by Evelyn Steele Little and Mabel Harris, also provided good material. A summary of the Marquis thesis shows that the prevalent methods of library instruction were three, and that they had not changed over the years:

1. The tour of the library during orientation week (this was considered unsatisfactory all along the line);
2. A series of lectures or lessons, varying from one to eight, sometimes as a postlude to the tour, sometimes without the tour, usually given on “borrowed time” from the English department;
3. Separate course in the curriculum, with or without credit, usually a one-hour, one-semester course.

The following reasons are given for the heretofore lack of success.
1. It has been “nobody’s baby,” passed to and from librarian to English teacher;
2. Librarian is chiefly an administrator;
3. Lack of time and staff;

4 Marquis, op. cit., p. 45-47.
4. Absence of data as to cost;
5. Difficulty of introducing a new course into the curriculum;
6. Failure of faculty and administration to recognize the need for instruction;
7. Wear and tear on reference books;
8. Tendency of students to crib;
9. Lack of student interest;
10. Poor class management;
11. Too little time for the amount of material;
12. Too little credit given.  

The most acceptable solution, according to the Marquis thesis, would be the one-hour, one-semester course, required of all freshmen.  

The Marquis thesis, bringing the problem into focus up to the early 1950's, is noteworthy on several accounts: first, it shows clearly that the need has been recognized principally during the twentieth century; second, modern trends of education have served to increase the use of the library and make the need more emphatic; third, the problem is still with us, although more has been written in the last decade, but there has been little enlightenment as to the best solutions; fourth, there is one significant sign of progress, that of increased use of audiovisual aids and self-teaching devices.  

The respondents to the questionnaire rated the library tour the least effective, if used alone. Eighty-nine of the librarians (56.7 per cent), however, still use the library tour. Chief objection to the tour seems to be that it usually comes before the student has need to use the library, and in the midst of much other orientation, rendering the student glassy-eyed and saturated with information and admonitions. Some of the librarians used library handbooks and/or followed through with lectures in classes. Occasionally the tour was conducted in small groups, with competent guides and sufficient time to make it a demonstration-laboratory period, complete with prepared worksheets.  

The orientation week lecture is not as popular today as it was twenty or thirty years ago. Only forty-six (29 per cent) of the respondents use the orientation week lecture. Only nineteen give assignments with the lecture. The same objections raised to the tour usually apply here—too early in the year, no recognized need to use the information, too academic, and too theoretical.  

The orientation course, either distinctly for library orientation or with library lectures a part of a general orientation course required of all freshmen, is also used by forty-six (29 per cent) of the colleges. Thirty-four require the course, twelve list it as optional. For the eighteen colleges granting credit for the course, the range was wide, one to six hours of credit. Sixteen colleges allow no credit. Apparently the organization of such courses is subject to administrative interest and control.  

The prevalent means of instruction is through library lectures in freshman English. Ninety-eight respondents (62 per cent) reported this form of instruction. The number of lectures ranged from one to six, with the one to three span the most frequent. Fifty-nine gave assignments with the lectures. A librarian gave the lectures in forty-five colleges; the English teacher in fifty-three. Fifty-two librarians reported lectures given in classes other than freshman English, listing twenty-four different areas, with education and history the most common. Comments on this form of instruction indicated that it was sporadic, usually dependent upon the invitation of the teacher.  

In this day of emphasis on visual approach to learning, it is surprising that ninety-four respondents (60 per cent) used no audiovisual aids in the instruction program. Those using AV listed a
wide variety, ranging from posters and charts to tapes, slides, filmstrips, opaque projectors, and closed circuit TV.

Only sixty-four (40 per cent) of the librarians used reference books for classroom demonstration. If the class is small enough (under fifty) for the students actually to see the color, size, and arrangement of the book it is thought to be more effective to demonstrate the use of each reference book that is introduced to the class. For larger classes the instructor may find that projectors of various types, or filmstrips, will be more effective. Only three of the respondents used teaching machines with some form of programmed instruction. This method of library instruction is scarcely beyond the experimental stage, but it definitely deserves further consideration.

The increasing numbers of freshmen in colleges across the land have compounded the need for adequate library instruction. "Some institutions are already overwhelmed by trying to provide even a basic introduction to library services, and content themselves with offering each entering student a library handbook and bidding him Godspeed."

Can this neat dismissal of the problem be its solution? Abraham Barnett comments—

"The size of the library, its physical involution, the intangible complexities which must be mastered for use overwhelm and even depress them. Many do not return until an inescapable assignment, a term paper or a prepared speech forces them to do so. They come back, but without heart; and sooner or later come to the reference desk for help."

It is at this point that our attitudes are crucial. The impressions we make during this brief interview will be either a confirmation of their hopelessness or a restoration of their motivation and confidence. The one acceptable course open to the librarian is the one that makes the student feel he is talking with someone who has mastered the library and that he can too for his more limited purposes achieve a proportionate measure of control.8

Daniel Gore urged that students should be taught LC subject headings, how to use the tracings on the LC card as an analysis of the book, the use of the shelflist as a bibliographic tool, and principles of bibliographic procedure. His clever analogy sums up his argument—

"Certainly no responsible person would entrust a student to drive a car after such a brief period (1 hour) of instruction. Yet students are required to use a library, which is far more complicated than an automobile, after such a cursory introduction to its mysteries. Perhaps this happens because teachers are in no danger of being run down by libraries, but the consequences are still quite serious if one accepts the premise that self-education after college (and during it as well) is vitally important to the student."9

**METHODS OF INSTRUCTION**

In the analysis of the questionnaire, brief mention was made of the various methods of instruction and the frequency of use. The most common methods are now considered in more detail.

***Library tour.*** While the tour has generally been rated ineffective as an instructional device in teaching the use of the card catalog, reference books, periodical indexes, and the like, it has been fairly effective in familiarizing students with locations of departments and services. Some colleges reported holding open house for freshmen, serving refreshments, keeping the atmosphere informal with the hope of encouraging freshmen to return for their research assignments. This is good for public rela-

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tions but hardly adequate for teaching the use of the library. Often student guides were used for the tours. Unless these guides are student library workers or have received intensive briefing, they can be destructive in both influence and information—a true case of the "blind leading the blind." Dorothy Hamlen, writing of her experience, includes a copy of a briefing letter sent to student guides that proved to be an excellent aid in setting the tone of the library tour.\(^{10}\)

Another college reported that freshman English teachers brought their classes on tour of the library in small sections, giving them browsing questions to look up.\(^{11}\) One hopes that these tours were arranged in advance with the library staff.

At Morgan College in Baltimore (under three thousand enrollment) an interesting orientation program was conducted. The freshmen were brought in two weeks early. Two hours a day for a five-day period were allotted to the library. The freshmen were divided into small groups. They received a library workbook with assigned problems. One teacher was assigned to each group and gave informal instruction as he worked with the students. The faculty had previously received an in-service training period and did an excellent job of instruction. As a result, the teachers were more oriented to the library themselves, and the freshmen entered the school year well oriented to the library.\(^ {12}\)

The orientation lecture. The one-hour lecture on the library to large groups of freshmen is second in familiarity to the tour. Typically the services of the library are described; the policies and regulations may be further delineated by mimeographed brochures; the layout of the building may be made graphic by floor plans; or elaborate, printed handbooks may be provided. In large groups, attention is easily lost and the "glazed look" may replace alert interest. Slides and films may assist in extending the attention span. Some orientation programs are lengthy enough for two library lectures. In larger universities, orientation lectures are held hourly for the first two weeks, allowing the freshmen a choice of time in which to attend two different lectures. At the University of North Carolina this plan was followed, with one added refinement: the freshmen were allowed to take a "screening test" in the use of the library. If a passing score was reached, the student was excused from the lectures.\(^ {13}\)

However good this initial lecture may be, if there is no follow-up, no testing program, no additional instruction through classes, little is likely to be retained of this early orientation instruction.

Individual instruction. No doubt the hoary definition of the perfect university—the student on one end of the log, and Mark Hopkins on the other—is familiar to all. There is much truth in it. Learning is most effective in a person-to-person setting. Library instruction is no exception. The individual approach of the librarian assisting the student is the most effective, if—

1. a librarian is available for help at all times;
2. the librarian is perceptive of the student's need;
3. the student recognizes the need and asks for help;
4. the method is varied to suit the student.

\(^ {10}\) Dorothy Hamlen, "Initiating the Freshman," Library Journal, LXXIX (May 1, 1954), 422-24.

\(^ {11}\) Mary Lou Chaney, "Discovering the Library," College English, XIV (April 1953), 407-408.


\(^ {13}\) Adriana Pannevis, "Freshman Library Instruction at the University of North Carolina," North Carolina Libraries, XIII (May 1955), 113.
Even at its best, individual instruction reaches only a fraction of the students. Many students do not use the library often enough to recognize their own need. Those who do are often too timid or indifferent to seek help.

There are devices and procedures used by various libraries to make individual instruction more efficient and the follow-up work more certain. Robert S. Taylor of Lehigh University described the program there in some detail, particularly a follow-up card used by the reference department. If a student's question is too complex or too time-consuming to receive immediate help, the student is asked to write his name and address on a postcard, along with the question, with the assurance that it will be searched and the assistance given by mail. Those writing on theses fill out a worksheet to be presented when requesting assistance.14

Table projectors and other self-teaching devices are used effectively in some instances, and will be considered later with audiovisual aids and programmed teaching. In spite of modern aids, however, the most important element in individual library instruction will continue to be the dedication and interest of the librarian involved.

Library instruction as a separate course. In colleges where orientation is a required and separate course, library lectures may form a significant part of the course, ranging from one lecture, with or without assignments, to four or more lectures. If library assignments are given, sections may be staggered in order that not too many will receive the instruction at the same time. This helps to avoid the traffic jams in the reference room.

What are the basic essentials that should be presented in library instruction lectures? Specific details will vary with each situation; variation will occur from year to year in the same college. No program is static. Several student library assistants who were sophomores, when asked their opinion of the prime essentials for freshmen in library usage, replied with one voice, "Teach the use of the card catalog!" One might suggest the following as minimum topics:

1. location of services in the library;
2. rules and policies of the library;
3. use of the card catalog;
4. encyclopedias and dictionaries;
5. periodical indexes;
6. statistical yearbooks and Facts on File;
7. indexes to composites: Granger, Sutton, etc.;
8. Book Review Digest;
9. biographical dictionaries.

The first two items, along with shelving arrangement and classification system, could be presented in the library handbook, using the handbook as text material in the lectures.

When library instruction can be given in a separate required course, the needs of the students can be met without the confinement of time and space experienced when fitting units of library instruction into a general orientation course. This seemed to be the goal and preference of many of the respondents to the questionnaire. The offering of such a course requires the recognition of need from the administration and the addition of sufficient library personnel to supply the teaching staff.

A very full and practical outline for a freshman library course is given by Wilson, Lowell, and Read in The Library in College Instruction.15 They recommend a required course, a minimum of twelve hours of instruction, and preferably twenty hours or more. Credit is usually one semester hour. There are, of course, many other excellent course outlines. The best of these can be only a guide,

for the library instructor must tailor his course to fit his situation. Gates's *Guide to the Use of Books and Libraries* is considered by some to be a fairly adequate text for such an orientation course.

**Library instruction in freshman course.** According to the librarians responding to the questionnaire, instruction in freshman English is the most prevalent method: 62 per cent reported instruction given by this means. Individual comments from the questionnaires on this means of instruction range from enthusiasm over the successful cooperation, to a realization of the inevitable cribbing, and finally, to a dismal lack of cooperation.

- For two years, each member of the professional staff has met with two or more sections of English 102 to give a lecture on the library as related to the freshman research paper. The staff is delighted with the plan. It has accomplished much more than the various programs given during orientation week. We seem to be recognized as individuals, rather than just "bodies behind desks."
- The basic idea of the program is very good. It integrates the library instruction with an actual English 100 term paper assignment, making the lectures more meaningful to the students in terms of their immediate needs.
- Unfortunately many English instructors do not know how to use the library themselves and apparently see no need for their students to know what they do not. Some attempts have been made combined with other orientation needs, but to no avail.

In *College English*, an article by Block and Mattis reports that after students choose their term paper topics early in the semester, the librarian comes in for two lectures, a week apart. The first lecture gives techniques of search, the second session gives help on their specific topics. Even after the scheduled sessions, the librarian may be invited back to give more help on different topics.

From Harding College in Searcy, Arkansas, comes a well outlined program by Annie May Alston.

I. Time of instruction

A. Freshmen—1 week of lessons beginning in third week of the fall semester.
B. Sophomores—after freshmen instruction is completed, usually about the end of the first six weeks.

II. Courses

A. Freshmen—in Communications (Freshman English) all sections three class periods.
B. Sophomores—in World Affairs, Institutions, Humanities, Biology, Health and Safety, two class periods.

III. Objectives

A. Freshmen
1. Position of library
2. Locations of materials
3. Library policies and regulations

B. Sophomore level
1. Reference tools in subject area under study
2. Acquaintance with authorities

The problem of students cribbing on the assignment sheets is ever present. If the same uniform assignment sheet is given to all, it is easy enough for those who have done the assignment earlier to pass answers on to later sections, or for those who are enterprising to divide up the assignment, with each member of a

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group doing a few questions, and pooling the answers. In the interest of making an assignment for several hundred students easy to correct, librarians have sometimes made the cribbing too easy. There are several ways of making it more difficult to be dishonest. Nearly all of them involve more preparation and/or more correction time.

At the University of New Hampshire, Hugh Pritchard reports another interesting variation to curb cheating. The students received the usual lectures on the card catalog, periodical indexes, and yearbooks. Then they were asked to find, if possible, their name in the card catalog, or one beginning with the same first three letters. They then answered a set of questions about this book (same questions used for all—the answers would, of course, vary) such as place, publisher, date, and title.

New Hampshire students also chose articles from the Readers Guide on some subject area of their major in college and gave the bibliographic data for each article, including subject headings they selected, the abbreviations they found, and whether or not the magazine was in the library. They again looked up their family name in biographical dictionaries, and their major field in college. Again, they were divided into groups of five or six. If a new student bribed someone else to do his work for him, the wear and tear on reference books was more evenly distributed.

Verna Melum writes that at the University at DeKalb, handbooks costing fifty cents, including the Wilson pamphlet on indexes, are available. Worksheets emphasizing points covered in the lecture and methods of study are given out. With the worksheets are mimeographed form sheets (uniform for all students) to be filled in with the answers to the problem. Problem cards, with clues in red, are passed out to all students. No two students in any section have the same problems. They copy the clues from the cards on their form sheets, and the problem cards are taken up by a teacher. These are used over and over, as no answers are written on the cards. Matching each problem card is a key card in green. This is given to the readers, and the correction is thus simplified. Tests are devised for machine scoring.

Eleanor Devlin feels that working with freshmen through the English classes or other small groups has a distinct advantage over the tours or large lectures:

New students will not be an amorphous mass to be herded through a perfunctory schedule that interests no one; instead they will be members of smaller classroom groups whose visits to the library will have a purpose planned by the teacher, expected by the librarian and understood by the students themselves.

Audiovisual aids in library instruction. Audiovisual means many things to many librarians. In the responses to the questionnaire, 38 per cent reported using some type of audiovisual device. However, these were chiefly slides, filmstrips, charts, and posters. Charts and posters have been used near the card catalog or periodical indexes to depict the methods of use. These are well and good if used to supplement organized formal instruction, but they are hardly an effective substitute. Often these printed devices, even handbooks, go unread except by the more conscientious student. Slides and filmstrips are cheaper than movies or television, but again they are merely adjuncts to the lectures and may suffer from the impersonalism of mass media.

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19 Hugh Pritchard and others, "Library Exercise for Freshmen," Library Journal, LXXXIV (September 15, 1959), 2576-78.
20 Verna Melum, "Library Instruction to 2,000 Freshmen," CRL, XXI (November 1960), 462-68.
21 Eleanor Devlin, "Thoughts on Freshman Orientation," Catholic Library World, XXIX (October 1957), 27.
Television, closed circuit or aired over the campus station, is good as a mass medium, perhaps preferable to the commercial filmstrips, or movies, but it is a "canned" lecture. Of course laboratory assignments would be difficult to give and impossible to follow through on when given to hundreds of students at once.

The Vu Graph projectors with transparencies, the overhead projector with transparencies, and the opaque projector are all useful aids in the classroom, usually accessory to the lecture. The overhead projector and transparencies especially work well with larger groups. Roland Moody reported the use of the Vu Graph and a taped narration; he was pleased that this cost only about $10 a lecture compared with $35 to $300 for commercially prepared material.22

Slides have been an effective visual aid in many instructional programs. Usually the slides are locally prepared, with kodachrome shots of the library, close-ups of the card catalog, indexes, or whatever is to be introduced. This can be substituted for taking the actual book to the classroom. Library policies and regulations can be presented via slides and transparencies, then reinforced by the printed handbook. Slides are a particularly useful substitute for the tour when the physical plant, locations of various rooms, loan desks, and services are shown.

An unusual adaptation of slides is described in a thesis by George L. Williams.23 This describes the use of the admatic slide projector with the slides arranged with explanatory scenarios on discs, and set up either for display use in a lobby (illustrating loan procedures) or by the card catalog (demonstrating card catalog usage). The projector is operated by a switch and will automatically turn the disc, presenting whatever procedure is placed on the machine. The scenarios must be carefully selected and worded. The slides are held on the screen for six seconds only, and an entire sequence is run in three minutes. Captions must be brief and simple, pictures must be carefully chosen to illustrate only the details in the caption—a single idea to a caption and a picture. A sound attachment is available for the projector. A "hold" switch may be pressed to hold a picture longer than the six seconds. Table model viewers are available for individual instruction.

Slides are more flexible than filmstrips, which of course have a rigid sequence. In planning either device for a local program, extreme care must be used to get good photography, logical sequence, and only one concept to a slide. If student "actors" are used, it is wise to have the same individual in all the slides of a given sequence.

Prepared films are available which are good in library instruction. Here again, if a film can be well planned and produced on campus which illustrates the local library, it is preferable. Films are more expensive than slides or strips and more difficult to keep up to date.

Televised library instruction is used in several colleges and universities. It is either released on a campus telecast or done as a regular classroom lecture on closed circuit television. The card catalog, indexes, and reference books can be presented by this means and released to the entire Freshman English class at once, or it can be given whenever so scheduled by the teacher. If released as a regular telecast it may be run at varying times and the students may view it in their dormitories or in some classroom or auditorium. In one college, eight sessions by closed circuit television were held with four hundred in each session. There were four receivers in

each room. The location of the libraries, special services, and card catalog were emphasized.24

The most extensive project reported in library instruction by TV has been at Illinois State University at Normal, Illinois, under the direction of Robert Hertel. A trial run was carried through with a small group of two hundred freshmen, divided into four sections: first group, all three lectures on TV; second group, two TV lectures, one live; third group, two TV lectures, one live in a large group; fourth group, all three lectures live. All received a pre-test and a post-test. There was no appreciable difference in scores. Lesson one was on the card catalog with an assignment. Lesson two included reference books (shown and described on TV). Lesson three included a test over reference and an introduction to periodical indexes with an assignment.25

Dorothy Fegerburg, in the same article, emphasized the teacher’s viewpoint. There must be careful, meticulous planning of the lesson. The lecture cannot vary from the plans and the cues for the cameramen and technicians. The teacher must stay in camera range and present a pleasing appearance. The instructions for technicians and lesson plan had to be written out in full. While there is no opportunity for students to ask questions, and the personal contact is missing, this medium does make mass instruction possible early in the year. This type of teaching before TV cameras is exacting, challenging, and “the hardest work she had ever done.”26

The students were asked for evaluation. Fifteen per cent were negative, complaining that they were unable to ask questions. Sixty-six per cent thought the lectures were more interesting on TV.

Admittedly there are difficulties in the TV instruction; most, however, are surmountable. The instructor should resolve the following questions.

1. What information and data do I wish to communicate: locations, card catalog, reference works, term paper form?
2. What courses must it fit?
3. What techniques are most effective—slides, movies, mockups, narrator?
4. Is the closed circuit most effective?

Sufficient time must be allowed for planning and production; a year ahead may be needed. A TV director should examine and give counsel on the script.

Programed instruction and teaching machines in library instruction. For the novice wishing orientation to the vocabulary of teaching machines, Philip Lewis has an informative article in the Wilson Library Bulletin which describes their possible use in library instruction and gives a brief glossary of terms.27

Southern Illinois University has drawn wide interest in the field of education, and particularly in library instruction, for its pioneer experiments with teaching machines. The venture has been reported in several professional journals; in fact, practically all articles discussing teaching machines for the library refer to this project.

The experiment with teaching machines at Southern Illinois University started in 1960.28 A learning room was set aside where the teaching machine was installed. A sequence of instruction was carefully planned, with instruction

26 Ibid., p. 45.
frames, picture or illustration frames, testing frames, all of which were projected in prescribed order on the screen of the machine. The student using the machine (only one at a time) operated the switch that changed the frame, so that he could regulate the speed at which he proceeded.

The University divided the freshmen participating (twelve sections of Freshman English out of 100) into three groups: four sections used teaching machines; four sections learned the same content from lectures; and four sections received no instruction at all. Pre-testing was done during the first week of school for all twelve sections. Assignment sheets were used for actual experience in the library. A post-test was administered after the instruction program was finished. The results showed no significant difference between those receiving instruction by teaching machine and those receiving it in the traditional lecture method. The control group (zero group) fell considerably below the other two, not catching up until near the end of the sophomore year.²⁹

Five units were programmed for the experiment:

1. Introduction to the library;
2. Card catalog;
3. Classification;
4. Periodical indexes;
5. Reference books.

One unit was available for a week, thus running the entire program through in five weeks.

There are two ways of programming the machine in relation to sequence: (1) the linear program, (2) the branching program. In the linear program every student had to take each step or frame in sequence just as a film strip would always be shown in the same order—no skipping of material. In the branching program the route of sequence could vary according to errors made. If the wrong response were given to a testing frame following the instruction frame, the student was routed back for more instruction (a remedial route). Answers were given by pressing a choice of buttons. If the correct response were made, the student could choose to skip certain steps and go on to more difficult material. About one hundred and forty frames were used in each unit. The average time needed was twenty minutes. Slow students might need thirty to forty; quick students took ten minutes. In this type of instruction the student knew immediately whether he was correct or not; he was not allowed to proceed until correct answers were given.

In Southern Illinois University there was the added feature of performance frames. After viewing an instruction frame, perhaps illustrating some filing principle in the card catalog, the student would be required to look up a certain heading in a sample drawer of cards by the teaching machine before proceeding to more instruction. A group of indexes and reference books were available near the teaching machine for other performance frames.³⁰ Detailed description of the machines, with more information on linear and branching programs and performance frames is given in the McCoy article.³¹

The advantages of the teaching machine are many.

1. every sentence of instruction is pre-tested;
2. the student may work independently;
3. no teacher or library staff member is needed as an instructor;
4. the student must master a point before being allowed to proceed; there is reinforcement of learning;


³⁰ Ibid., p. 430.

5. the student must respond physically and is thus kept more alert;
6. bright students may proceed at their own speed taking by-pass options;
7. slow students may proceed at their own speed with less frustration than in a class;
8. the student knows immediately whether he has answered correctly or not;
9. the entire content must be examined and re-evaluated for worth, learning sequence, etc., before it is programmed.

There are obvious difficulties, however, including the following:

1. Skill is required in programming a sequence and phrasing of questions (technicians, psychologists, and subject specialists needed);
2. Concepts are more difficult to program than information (a catalog card is easy, classification is hard);
3. Movies and sound are needed with the machine;
4. Only one student can use it at a time. A battery of machines would be needed in large universities to handle several thousand freshmen. Even four or five machines would be needed in smaller colleges. The expense would be prohibitive for most institutions.32

How then can teaching machines fit into the average library instruction program? If one is fortunate enough to have several machines available on the campus, perhaps their use could be preempted for library instruction at different times of the year. Certainly they could be most efficient for review and remedial work.

Out of the experimentation at Southern Illinois University has come the possibility of programmed instruction via book form. Several texts, notably in mathematics, have been devised for individual instruction and have proved successful. Library instruction material is available from the Southern Illinois University Press in book form, programmed for individual instruction. The results on the testing program are the same for book form or machine. The books are cheaper than machines, and of course each student can have access to a text. The book form is easier to use but it is also easier to cheat on mastery of information. There is no writing of answers in the text, so they can be used with succeeding classes.33

Tests. Currently, the test used most widely is Feagley, "A Library Orientation Test for College Freshmen."34 It is devised for diagnostic, or pre-testing. Norms are available for uninstructed students. The test is not timed. Fifty to sixty minutes is the suggested time. It seems adequate as a guide to what and how much instruction is needed. Some of the questionnaire respondents suggested instructing only those students who fell below a predetermined passing mark on this test. For local comparison the test might be used again, unannounced, after the instruction program. No norms are provided for this use of the test. Other tests available are listed in Tests in Print and Buros' Mental Measurements Yearbook.

CONCLUSIONS

Present conditions—
1. Library instruction in some form is more common than it was twenty years ago.
2. Librarians on the whole agree that instruction in library usage is most acutely needed.
3. Nearly all reports of surveys indicate universal dissatisfaction that not enough is being done.

32 Ibid., p. 472.
4. There is a consciousness of overwhelming numbers of freshmen to be instructed, and of wholly inadequate staffs to meet the need.

5. There is much evidence of a lack of cooperation between college administrations and librarians and between librarians and faculty (chiefly English departments) in the question of library instruction.

Methods—

1. Library tours alone have proved to be of little value in freshmen orientation.

2. Orientation lectures usually have little value unless followed by later instruction. They usually come too early in the year for freshmen to be motivated by need.

3. Library instruction should come, if possible, during the first two months of the school year, unless scheduling of the freshman term paper takes place at varying times during the year.

4. Librarians are usually more effective instructors in library usage than instructors in other disciplines, unless the faculty member is himself well oriented to library usage and the needs of the freshman.

5. The lectures assigned to the library during an orientation credit course may be more beneficial than during orientation week, but they often lack the motivation of assignments.

6. The separate, required credit course, usually one hour for one semester, may not be possible in large universities, may not be obtainable in small colleges, but where practicable it is usually the most satisfactory coverage of library instruction for lower classmen.

7. The released-time program in freshman English (in which the librarian gives the instruction in the classroom) seems to be the most prevalent in the small-to-medium sized college. This is usually satisfactory, if the relationship with the English department is a mutually cooperative one. This too, is true of released time in other classes and departments.

8. Assignments using the books introduced are, in the experience of some, most essential to the retention of the instruction given. The students need to see the books introduced, and then use them individually in their own assignments.

9. Assignments create problems of cribbing, of heavy traffic in the reference area, of heavy use of certain books. This can be partially solved, where feasible, by individual assignments or by intelligent introduction of individual research topics by the English teacher.

10. Televised lectures are excellent as a mass medium where instruction must be given quickly to a large group, but the weaknesses are a lack of personal contact and the lack of opportunity for questions.

11. Movies, especially those locally produced, like televised lectures, are excellent as a mass medium, saving staff time and personnel. Like TV lectures, they also fail in providing adequate assignments and follow-up with personal contacts. This is a prevalent problem in many large institutions where instruction must make use of mass media, or none at all.

12. Teaching machines are excellent where numbers of students and budgets permit. When only one student can receive instruction at a time from a machine, this limits the usefulness.

13. Programed instruction in books may be the answer for large institutions where small group instruction is impossible. This is a newer medium, not thoroughly tested for library instruction, but it has possibilities.

14. Individual aid by the library staff to the struggling student is still the epitome of good instruction. True, it cannot take the place of group instruction in most colleges, for they cannot reach with personal attention all who need help. But machines, movies, or TV will never replace the helping hand of an interested librarian.
The Place of Library Resources in Doctoral Programs

This paper supplements an earlier paper by Robert B. Downs on doctoral programs and library resources. While the factors involved in successfully implementing a doctoral program are many and complex, to carry out such a program in a variety of fields, it appears that there should be at least three thousand current periodicals (and five hundred thousand volumes, as Dr. Downs states). Even with the best library resources, one cannot generally hope to produce more than one doctorate out of every ten graduate students enrolled in any year, as figures in this paper indicate.

In a recent paper entitled “Doctoral Programs and Library Resources,” R. B. Downs\(^1\) presented a table showing the number of doctoral degrees—minimum being five—conferred by all the educational institutions in the United States during the decade 1953–1962. The purpose of that paper was to consider if direct correlation exists between the number and variety of doctoral degrees awarded and the strength of library resources in individual institutions. One will easily agree with Dr. Downs that “since there are no established norms, exactly how many volumes should be held by the library and how much money spent for books in an institution offering doctoral programs are debatable matters. Pragmatically speaking, however, it seems doubtful that high level doctoral work in a variety of fields can be carried on with less than half a million volumes.”

The purpose of the present paper is to consider briefly some of the other important factors upon which the production of doctoral degrees in an institution depends and the relative importance of library resources—books and current periodicals—as one of these factors. (Dr. Downs did not take into account the strength of current periodicals holdings as a factor, and his table does not give figures on this.) We also consider the proportion of doctorates conferred to the total number of graduate students enrolled.

It is a simple but important fact that the number of doctorates produced by an institution, or by one of its departments, depends almost entirely upon the number of graduate students who work for the doctorate degree. Also, if the concerned institution offers a doctoral program, the size of the doctoral student body has some, but by no means vital, relation to the size of the graduate student body as a whole. The number of admissions to the graduate school of an institution for a master’s program depends upon various factors. As some of these, we might mention organization and admission policies, curricula, physical facilities, size of the undergraduate student body in the concerned institution and the other institutions in the

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Mrs. Subbarao is Catalog Librarian in the University of Alberta.
neighborhood, the amount of better employment opportunities available in the surrounding community for higher qualified persons, financial aid available to graduate-level students, library resources, the size and stature of its faculty members, and the general reputation and standing of the institution in the academic world. Some of the above-mentioned factors of course may have little or no relevance or importance in a specific institution. However, it would seem reasonable to assert that the last five of these factors have a direct bearing on the number of doctorates produced.

An institution may, as a part of its policy, emphasize its interest in and duty toward the advancement of knowledge and promotion of research. In pursuance of this policy, it may rapidly provide excellent physical facilities and even library resources. But it may still be unable to attract, even with the best of efforts, the right type of faculty members. This is the one thing that cannot be achieved as a crash program. But if it is successful over the years in securing a distinguished and widely recognized cadre of faculty members, the institution is indeed lucky, and it can be said to have crossed the main hurdle. Faculty members who devote a good deal of their time to research and writing will surely stimulate their graduate students with new and recent ideas. The presence of such a faculty in a department is doubtless the most important factor in determining the size of its doctoral students and the number of doctorates produced. Graduate students flock to such a department, for they know that they will be benefited and inspired by the presence of such a staff. From direct exchange of ideas they get the needed stimulus for creative scholarship, and at least some of the excitement of research going on in the department "rubs off" on the receptive minds of the students.

If the kind of faculty described above is available in a department which is offering a doctoral program, then the size of the library collection, even in the concerned departmental library, has really little relevance to the number of doctorates produced by the department. A good staff will surely see that the library collection pertaining to their field and to their discipline is adequate, and their doctorate production is bound to be good—not because of their library resources, but because of the quality of the staff (and students). A not-so-good staff in a department provided with sufficient financial resources can build up a vast library collection, but the production of doctorates may not be high. The existence of good library facilities is generally, at best, a necessary condition for the production of doctorates, but not at all a sufficient condition. In exceptional circumstances, this may not even be a necessary condition. This is because a thesis adviser may suggest research problems for which there is not much existing literature, or the student may gather all existing literature on a particular topic of research by means of reprints and preprints from the concerned authors, and then go on with his research with no more trips to the library! But, on the whole, one agrees with Dr. Downs that "an institution outstanding for its graduate offerings is almost invariably equally notable for the strength of its library resources." The converse, of course, is not true—and this could be for various reasons. A simple reason could be that the institution does not offer a graduate program at all, even though it might have outstanding faculty members—like the Institute for Advanced Study at Princeton. A second reason may be the lack of sufficient research oriented faculty members.

We might mention here a rather peculiar situation presented by some of the state colleges in the United States. Some have very decent library resources and
a good number of research-minded faculty, but offer nothing beyond master's programs. Fortunately, such faculty put these resources to good use in connection with their own research work—even though they are not required to engage in research as a requisite for advance in salary or rank.

The table given in Dr. Downs's paper indeed provides some very curious facts. Harvard holds the first rank in the number of library volumes, but only fifth rank in the number of doctorates conferred, while the corresponding ranks for Columbia are sixth and first. (All these remarks pertain only to the decade 1953–1962, and the position could possibly have changed since then.) Wiscon-

Fig. 1.—Correlation between number of doctorates conferred and number of volumes in institution's library, 1953–62.
### TABLE 1

<table>
<thead>
<tr>
<th>INSTITUTION</th>
<th>DOCTORATES CONFERRED in 1962-1963</th>
<th>GRADUATE STUDENTS ENROLLED 1962-63</th>
<th>CURRENT PERIODICALS</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Rank of Institution in This Respect</td>
<td>No.</td>
<td>Per Cent of All Grad. Students</td>
</tr>
<tr>
<td>California</td>
<td>1</td>
<td>731</td>
<td>4</td>
</tr>
<tr>
<td>(all campuses)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Columbia</td>
<td>2</td>
<td>517</td>
<td>5</td>
</tr>
<tr>
<td>Illinois</td>
<td>3</td>
<td>450</td>
<td>6</td>
</tr>
<tr>
<td>Harvard</td>
<td>4</td>
<td>446</td>
<td>6</td>
</tr>
<tr>
<td>Wisconsin</td>
<td>5</td>
<td>428</td>
<td>9</td>
</tr>
<tr>
<td>Michigan</td>
<td>6</td>
<td>379</td>
<td>4</td>
</tr>
<tr>
<td>N.Y.U.</td>
<td>7</td>
<td>345</td>
<td>2</td>
</tr>
<tr>
<td>Ohio State</td>
<td>8</td>
<td>329</td>
<td>8</td>
</tr>
<tr>
<td>Minnesota</td>
<td>9</td>
<td>314</td>
<td>6</td>
</tr>
<tr>
<td>Purdue</td>
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<td>290</td>
<td>7</td>
</tr>
<tr>
<td>Stanford</td>
<td>11</td>
<td>276</td>
<td>6</td>
</tr>
<tr>
<td>M.I.T.</td>
<td>12</td>
<td>274</td>
<td>9</td>
</tr>
<tr>
<td>Indiana</td>
<td>13</td>
<td>266</td>
<td>3</td>
</tr>
<tr>
<td>Yale</td>
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<td>231</td>
<td>6</td>
</tr>
<tr>
<td>Chicago</td>
<td>15</td>
<td>227</td>
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</tr>
<tr>
<td>Texas</td>
<td>16</td>
<td>223</td>
<td>9</td>
</tr>
<tr>
<td>Mich. State</td>
<td>17</td>
<td>223</td>
<td>3</td>
</tr>
<tr>
<td>Cornell</td>
<td>18</td>
<td>206</td>
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</tr>
<tr>
<td>Iowa</td>
<td>19</td>
<td>205</td>
<td>8</td>
</tr>
<tr>
<td>Penn. State</td>
<td>20</td>
<td>202</td>
<td>8</td>
</tr>
<tr>
<td>Iowa State</td>
<td>21</td>
<td>174</td>
<td>11</td>
</tr>
<tr>
<td>Princeton</td>
<td>22</td>
<td>171</td>
<td>18</td>
</tr>
<tr>
<td>Northwestern</td>
<td>23</td>
<td>168</td>
<td>7</td>
</tr>
<tr>
<td>Pennsylvania</td>
<td>24</td>
<td>164</td>
<td>2</td>
</tr>
<tr>
<td>Univ. of Wash.</td>
<td>25</td>
<td>161</td>
<td>4</td>
</tr>
<tr>
<td>S. Calif.</td>
<td>26</td>
<td>147</td>
<td>2</td>
</tr>
<tr>
<td>Pittsburgh</td>
<td>27</td>
<td>138</td>
<td>2</td>
</tr>
</tbody>
</table>

* Serials omitted.
† Some serials included.
‡ Some newspapers included.

Sin holds third rank in the number of doctorates conferred, but only sixteenth in the number of library volumes held. Duke holds more library volumes than Wisconsin but takes only the thirty-seventh rank in the number of doctorates conferred. For every one hundred library volumes held by Purdue, Miami holds more than one hundred and nine volumes; but for each doctorate produced by Miami, Purdue produced 203 doctorates. Thus Purdue gets the thirteenth rank in this respect to Miami's 169th! If there is a perfect correlation between the ranks by number of doctorates conferred and number of library volumes held, an institution holding a certain rank with respect to the former should hold the same rank with respect to the latter. Plotting the points corresponding to each of these institutions with these ranks taken, respectively, as the x and y coordinates, the resulting graph would, under a perfect correlation, be a straight line through the origin equally inclined to the x and y axes. The actual graph for the institutions which produced a minimum of a thousand doctorates during the decade under consideration is shown in Figure 1. The reader can see for himself how widely this graph differs from a perfect correlation, y = x.

What is the other available data then that may have relevance to the number of doctorates conferred by an institu-
Fig. 2.—Correlation between number of doctorates conferred and number of graduate students enrolled, 1962-63.

tion? Since doctoral programs invariably involve writing a thesis, there should be, of course, facilities in the library for research, and this is certainly something indispensable. Since journals usually provide a greater source of current research material than do books, it is reasonable to consider if there is some correlation between the number of doctorates conferred and the number of current periodicals it receives. Another factor which may have a bearing, at least in the case of the big institutions, is the total number of graduate students enrolled in any year (both for master’s and doctorates) in relation to the percentage of doctorates awarded.

Table 1 gives: (1) the total number of
graduate students enrolled in the Fall of 1962; (2) the number of doctorates conferred during the period September 1962–June 1963; (3) the percentage these doctorates form out of the total number of these graduate students; and (4) the number of current periodicals in the concerned institution. This table is confined to the twenty-seven institutions which conferred at least a thousand doctorates during the decade 1953–1962. The table was prepared to determine if these data are helpful in drawing any significant conclusions, at least in the case of these leading institutions. Using the table, a graph (Fig. 2) was prepared that correlates the rank of the institution by virtue of number of doctorates conferred (plotted on the x coordinate) with its rank by virtue of number of graduate students enrolled during 1962–63 (plotted on the y coordinate). A similar graph using the total number of periodicals would have been useful; however, this could not be done since the figures available (as given in American Universities and Colleges, 1964 edition) sometimes include periodicals—either wholly or partly—and sometimes do not.

Table 1, like Dr. Downs's, shows some curious facts and gives some useful information. Except in very few cases, the number of doctorates conferred by an institution during 1962–1963 significantly exceeds the average number conferred for the same for the decade 1953–1962. This is doubtless to be expected with growing enrollments in the graduate schools, with larger numbers of research-minded faculty being appointed to the institutions, and with a growing emphasis on the importance of research degrees. Also, the first eight institutions in Dr. Downs's table are still the first eight in our table, though with small changes in their relative order. Wisconsin has fewer periodicals and fewer graduate students than Pittsburgh but has awarded more than three times the number of PhD's and occupies in this respect the fifth rank to Pittsburgh's twenty-seventh. None of the institutions has fewer than three thousand current periodicals.

Turning to the percentage of graduate students who got doctoral degrees during the year under consideration, Princeton has the highest figure, 18 per cent, while having the lowest number of graduate students. The next highest is 11 per cent for Iowa State, and curiously this institution's graduate student enrollment is the second lowest. The lowest percentage is 2, while the percentage held by the largest number of institutions is 6. These details are summarized in Table 2.

<table>
<thead>
<tr>
<th>TABLE 2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Doctorates conferred, 1962–1963, as per cent of all graduate students</td>
</tr>
<tr>
<td>18 11 9 8 7 6 5 4 3 2</td>
</tr>
<tr>
<td>No. of institutions</td>
</tr>
</tbody>
</table>

There may be many reasons for Princeton having the smallest enrollment of graduate students and yet producing the highest percentage of PhD's. As their graduate school Announcement says, their admissions are normally limited to male students, and the number of students in the graduate schools is strictly limited. With its excellent faculty and high reputation in the academic world, it will receive a large number of applicants, but, as their Announcement says, they choose the most outstanding among the applicants. There is no program at Princeton designed for students who wish to take the degree of Master of Arts as a terminal degree. The master's degree is granted there as an incidental degree, and is offered after completion of a portion of the requirements of the PhD degree. There are some other institutions which adopt roughly the same admission policies as Princeton, though the percentage of PhD's produced is not
as high as that for Princeton. As an instance, we might mention Yale. Its Bulletin says that the size of each department is strictly controlled, and that, except for programs in industrial administration, international studies, and teaching, it gives preference in admission to candidates who intend to complete the PhD degree. It is of interest to notice that our table shows that Yale’s percentage of PhD’s out of a total graduate student body of 3,772 is only 6—which is a third of Princeton’s. And Yale’s faculty and academic standing are generally considered as good as anyone’s. There may be a number of other factors involved which need to be considered. However, one can still draw some useful conclusions. Keeping aside Princeton and Iowa State as exceptions, the ratio of the number of PhD’s conferred to the total number of graduate students enrolled is in all cases less than 1:10, and in more than half the cases it is even less than 1:16. This being the position in the top twenty-seven institutions, one can safely assume that things are no better in the cases of the other institutions.

In summary, we can say the following. To provide for an effective doctoral program and to hope to produce a decent number of PhD’s annually, it would appear essential for an institution to have a book collection of at least half a million volumes (as Dr. Downs concluded); a periodicals collection (current subscriptions) of at least three thousand; and admissions policies which allow a graduate student body which is at least ten times the number of PhD’s it wishes to produce. But these, among many others, are only strictly necessary factors for successful implementation of doctoral programs. After a certain stage is attained, the number of library volumes held or the number of current periodicals becomes less and less significant as a factor in the number of doctorates produced. (The amount of money spent by the institution on improving its library resources is reflected by the number of books and current periodicals held, and it need not therefore be considered as a separate factor.) Again, merely trying to multiply the number of graduate students does not increase the output of PhD degrees. What matters most, after the above necessary conditions are met, are (1) the number of scholarly and research oriented faculty members who are active in publication and capable of inspiring and guiding the graduate students for doctoral work, and (2) the importance the institution’s administrators assign to securing, retaining, and aiding such faculty. This of course depends in turn upon the financial resources of the institution, the availability of such qualified persons for recruitment, and various other factors which are beyond the scope of the present paper. If we had data (qualitative as well as quantitative) from each institution on the number of faculty members who are active in research, it would doubtless have provided a very significant factor in relation to the number of doctorates produced annually by the institution. One could only wish that such data were readily available.
The Title Catalog: A Third Dimension

The accessibility of the card catalog seems to be inversely proportional to the complexity of its arrangement. A catalog divided into author-title and subject sequences simplifies the filing order of cards and facilitates the use of each catalog. It is argued here that a three-way division into author, title, and subject catalogs will further augment these advantages. In this paper a separation of the title catalog at the University of Wisconsin-Milwaukee library is described and evaluated.

There is practically no current literature on dividing the public catalog into separate author, title, and subject alphabets. The pros and cons of separating out the title catalog were discussed prior to World War II, and the topic disappeared from library journals when the controversy over the two-way division of public catalog into author-title and subject catalogs subsided.

The library of the University of Wisconsin-Milwaukee divided its public catalog into author-title and subject catalogs in August 1963; a three-way separation into author, title, and subject catalogs was undertaken in the summer of 1967. The three separate catalogs have been operational since September 1, 1967. The change was accepted overnight by both the patrons and library staff; the benefits of the separation exceeded expectations; and no criticism or complaint has as yet been reported.

Discussion of the merits of the three-dimensional public catalog has been reopened for two basic reasons: (a) Theoretically, a combined author-title catalog is a functional paradox. Author entries, like subject entries, aim at bringing together related works (by author, series, subjects, etc.). The title entry, on the other hand, is a unique feature of each individual work, separating it from any other bibliographical entry. Title arrangement adds a third dimension to the public catalog, which is radically different from the linear, or horizontal, listing by authorship and from the depth, or vertical, grouping by subject. (b) Practically, the verification of library holdings by a known title is a simple activity, easily grasped by patrons unversed in library rules, and a fast and reliable method in a pre-order search by the staff.

Arguments in Favor of Separation

A consideration to divide the public catalog into separate author, title, and subject catalogs is a logical extension of the arguments once presented in favor of the author-title and subject catalogs. Both the objectives sought at that time and the supporting arguments were already tested in actual use. It is believed that further subdivision will integrate the public catalog even more with the needs of the library. The impact of a fast-growing collection, and the consequent multiplication of catalog cards, will be lessened by a three-part catalog.

Mr. Nitecki is Coordinator of Technical Processes in the University of Wisconsin-Milwaukee. He wishes to acknowledge his appreciation to Mark Gormley, Director of UWM Libraries, for his support of the project and to his colleagues for encouragement and advice.
since each part will grow proportionally less rapidly. The increasing emphasis on the scholarly collection in an expanding university is reflected in the emerging pattern of searching for a particular book rather than locating books on a particular subject. A separation of author and title catalogs will provide two independent and simultaneous approaches in locating a book, each requiring less search by eliminating irrelevant entries.

Furthermore, the three-part division of the public catalog will break up a complex alphabetical arrangement into three arrangements of decreasing complexity: from the involved subject to the less difficult author, and to the relatively simple title arrangement. This will decrease both filing and retrieval times.

The three-dimensional catalog will also provide for the arrangement of cards by their clearly defined purposes: to provide an index of titles in the title catalog; to list authors in the author catalog; and to group together books on similar subjects. This functional arrangement of catalog cards will allow for an improved economy of use, since it will utilize the distribution of the processes of fast searching for known works and the slower search for unknown titles. It will also reduce the congestion at the card catalogs by providing an easier access to each one of them.

A separate title catalog will be of even greater value to the library staff engaged in checking the library holdings, since the title information on the initial order forms is more often likely to be reliable than the corporate entries in the author catalog. This aspect of the title approach is already successfully utilized in the UWM library by filing LC proof slips by title in the proof slip file.

Instruction in the use of the card catalogs can be reduced to a simple inquiry concerning the traditional "who wrote what on which subject," directing the patron to the appropriate author, title, or subject catalog.

In summary, it seems that little is gained by combining the author and title entries in one catalog. Checking a drawer with a number of similar titles may for some users be more successful than learning to guess at the proper corporate entry for one title. Since the patron is seldom simultaneously interested in a search for the author, title, and subject of the same work, the separate catalogs will contribute to a more direct approach to the information sought. The three-part catalogs provide more spatial flexibility, thus allowing more freedom in the floor arrangement of the catalog room. Finally, a re-filing of the titles back to the author-title catalog is a relatively simple, fast, and inexpensive process. This would allow for easy correction of mistakes not anticipated at the time of separating the catalogs.

The Title Catalog in the UWM Library

The development of the separate title catalog in the UWM library was accomplished in three stages: first, the scope of the planned catalog was defined; then the size of the project was estimated by sampling the library collection; and finally the actual project was implemented.

The scope of the title catalog. The policy statement concerning the title catalog was formulated in close cooperation with the coordinator of public services, thus expressing the desire to provide both a simple index for the patrons and an efficient tool for the library staff. The underlying principle in defining the scope of the catalog was to maximize its content first, allowing for the withdrawal of some types of entries later on, if they proved unnecessary in the actual use of the catalog.

Perhaps the single most important decision made was the inclusion of at least one card for each title in the collection. The dilemma of the inclusion of some "common" and insignificant titles is cre-
TABLE 1. LIST OF SOME COMMON TITLES IN THE TITLE CATALOG (UWM LIBRARY)

<table>
<thead>
<tr>
<th>Heading</th>
<th>Number of Entries with Headings</th>
<th>Ending by Period</th>
<th>Extended beyond First Punctuation Mark*</th>
<th>Expanded by Additional Words†</th>
</tr>
</thead>
<tbody>
<tr>
<td>Autobiography</td>
<td></td>
<td>13</td>
<td>99</td>
<td>19</td>
</tr>
<tr>
<td>Collected works</td>
<td></td>
<td>9</td>
<td>1</td>
<td>10</td>
</tr>
<tr>
<td>Complete letters</td>
<td></td>
<td>—</td>
<td>1</td>
<td>1</td>
</tr>
<tr>
<td>Complete plays</td>
<td></td>
<td>5</td>
<td>1</td>
<td>6</td>
</tr>
<tr>
<td>Complete poems</td>
<td></td>
<td>8</td>
<td>—</td>
<td>24</td>
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<tr>
<td>Complete poetical works</td>
<td></td>
<td>2</td>
<td>1</td>
<td>37</td>
</tr>
<tr>
<td>Complete short stories</td>
<td></td>
<td>2</td>
<td>—</td>
<td>2</td>
</tr>
<tr>
<td>Complete works</td>
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<td>43</td>
</tr>
<tr>
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<td>1</td>
<td>14</td>
</tr>
<tr>
<td>Essays</td>
<td></td>
<td>10</td>
<td>32</td>
<td>403</td>
</tr>
<tr>
<td>Introduction</td>
<td></td>
<td>—</td>
<td>—</td>
<td>1365</td>
</tr>
<tr>
<td>Letters</td>
<td></td>
<td>36</td>
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<td>367</td>
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<td></td>
<td>21</td>
<td>5</td>
<td>318</td>
</tr>
<tr>
<td>Works</td>
<td></td>
<td>1</td>
<td>3</td>
<td>78</td>
</tr>
</tbody>
</table>

* Includes all punctuation marks except the period (.).
† Many of these entries have titles made by LC.

Attested by two convincing but opposing arguments: (a) the more common the title, the easier it is to remember; and (b) the inclusion of all common titles creates a disproportionately large section of identical titles. One solution considered was to exclude the "meaningless" titles. Such a list of exclusions could be compiled gradually, as actual need arises. In each case needed cross references could direct the user from the title to the author catalog.

In the final analysis, the advantages of including all titles outweighed the disadvantages. It was reasoned that the avoidance of exceptions in the coverage of the title catalog would contribute to the simple interpretation of its scope by patrons, while the completeness of the title coverage would significantly increase the reliability of the catalog for searching purposes by the staff. Table 1 lists the number of cards actually filed in each of the more common "meaningless" categories. Each of these larger entries is now separated by guide cards, subdividing each entry by author, and no withdrawal of these cards is at present contemplated.

It is felt that the luxury of making title cards for each entry in the collection can be afforded, since in the bargain the additional luxury is obtained of being able to identify the book in one pass, by
instructing the student searcher to check the title catalog under the title, exactly as it appears on the title page of the book in hand or as printed in the dealer's catalog. Any discrepancy between the card in the catalog and the title searched is a warning for possible variation in editions. It is known that a significant number of patrons do consult some of these common titles. Once it is determined which of the “meaningless” entries are really meaningless to all the users of the catalog, they will be withdrawn from the title catalog. Now, however, it is easier for a searcher to check one drawer of “poems” under two or three of its sub-arrangements (e.g., under the name of a poet, editor, compiler, or institution) than to walk from one end of the author catalog to the other, if the possible entries happened to be dispersed, between A and Z. This, together with the simplicity of an unequivocal instruction: “check by title,” is worth the extra cards filed under “poems.”

The policy concerning the inclusion of other types of entries is less controversial, and some more important decisions are listed here as an illustration of the scope of the title catalog.

As a rule, at least one title card is made for each entry exactly in the form that appears on the title page of the book.

Alternative titles such as binder's titles, caption titles, and catchword titles are not included in the catalog. However, all the titles made by LC, even if they include some of the forms just mentioned, are also added in the catalog. The title catalog is a public record; the inventiveness of the individual cataloger is relative and difficult to anticipate and therefore often “meaningless.” The same inventiveness, sanctified by an LC card, renders the title useful and binding.

Additional title cards are also made for transliterated titles, for all forms of changed titles, and for some distinctive titles of the parts of sets.

Title main entries are, of course, made, but they are also duplicated in the author catalog. The concept of the “main entry” is being re-examined, however, and if the concept itself is discarded, the title main entries will also be discarded from the author catalog. In addition, a buff copy of the purchase order is interfiled by title in the title catalog. These slips are replaced by permanent cards after the titles are received and cataloged. A guide card referring the patron to the author catalog is made for each “series made” and filed in the title catalog under the series title. The incomplete open entries and broken sets (i.e., closed entries with gaps in holdings) are placed in a plastic cover with the imprint: “Incomplete—inquire at information desk.” The covers are removed after the set is completed. The serials title entries are identified by an additional note directing the user to consult the list of serials holdings which is distributed, in the form of a computerized printout, throughout the library.

Pilot project. In order to estimate the cost and size of the expanded public catalog, a survey of the anticipated changes was conducted at the beginning of summer 1967. Sixteen drawers from selected parts of the shelflist were examined, listing the approximate number of cards in each drawer, the total number of title entries already made, and cards to be added. The survey was based on the assumption that the library would make at least one additional card for each entry.

At the time of the survey, the library’s shelflist had a total of 160 drawers, with

<table>
<thead>
<tr>
<th>TABLE 2. ESTIMATED EXPANSION OF THE PUBLIC CATALOG IN UWM LIBRARY BY SEPARATING AUTHOR AND TITLE ENTRIES</th>
</tr>
</thead>
<tbody>
<tr>
<td>Drawers examined</td>
</tr>
<tr>
<td>Cards in the drawers</td>
</tr>
<tr>
<td>Titles to be added</td>
</tr>
<tr>
<td>Title main entries to be duplicated</td>
</tr>
<tr>
<td>Total title entries to be added</td>
</tr>
</tbody>
</table>
**TABLE 3. RELIABILITY OF THE PILOT PROJECT**

<table>
<thead>
<tr>
<th></th>
<th>ESTIMATED DATA</th>
<th>ACTUAL DATA</th>
<th>OVER-ESTIMATION</th>
</tr>
</thead>
<tbody>
<tr>
<td>Total number of cards to be added</td>
<td>36,130</td>
<td>31,643</td>
<td>4,487</td>
</tr>
<tr>
<td>Per cent additions</td>
<td>20.73</td>
<td>18.16</td>
<td>2.57</td>
</tr>
<tr>
<td>Cost of reproduction</td>
<td>$957.45</td>
<td>$838.53</td>
<td>$118.92</td>
</tr>
</tbody>
</table>

approximately the cards distributed about equally among them. In the sample tested, the range varied from 840 to 1,120 cards per drawer, each averaging approximately 6 per cent of the total sample examined.

It was estimated that the public catalog would expand by approximately 16 per cent if all needed titles were made, with an additional increase of 3.8 per cent created by duplication in the author catalog of all title main entries. Since the sixteen drawers examined constituted 10 per cent of the total number of drawers, the projected addition to the title catalog was estimated at 36,130 cards. Assuming the cost of reproducing one card to be $0.0265, the total cost of separation (excluding alphabetizing) would amount to $957.45. This estimate was, of course, relative to the degree of reliability of the sample tested. To compensate for variable factors (e.g., difference in the thickness of catalog cards) an average of eighty-seven cards per inch was used in all estimates. The sample turned out to be a satisfactory estimate of the percentage expansion of the title catalog, although the sample tested constituted 8.3 per cent of the total shelf-list content and not the 10 per cent originally anticipated. As seen in Table 3, the projected expansion of the title catalog by 36,130 additional cards was 2.57 per cent larger than the final number of cards made.

**Description of the project.** The actual separation of the author-title catalog took place in the two-week recess between the summer and fall semesters of 1967. Sixteen students, supervised by one full-time staff member from the technical processes division, examined, reproduced, and filed cards without interfering with the routine operations of the library, open during that period to the public. The students were assigned to the following stations:

- **Shelflist:** Each drawer was checked for title tracings; titles without title entry were withdrawn.
- **Retrieval:** Main entry cards were pulled from the public catalog, checked against the shelflist cards, and forwarded to the next station. The shelflist cards were stamped with "Title" tracing and refiled in the shelflist catalog. The above two operations were performed in batches of ten cards, thus providing an easy control of cards withdrawn and refiled, keeping the number of cards floating between the catalogs at a minimum and for a very short period of time.
- **Xeroxing:** The main public cards were Xeroxed and immediately refiled in the author catalog. The Xeroxed cards were cut, the holes drilled, and the cards forwarded to the next station.
- **Preparation:** The title on each card was underlined in green ink for filing purposes (UWM library does not raise the title entry), and the cards alphabetized.
- **Filing:** Each card filed was accompanied by a red flag; the flags were removed after the filing was revised.

The average processing times, based on timing three students, each processing 250 cards at one time, were as follows:

- Retrieval of cards . . 41.3 sec./card
- Marking . . . . 12.2 sec./card
- Alphabetizing . . . . 14.2 sec./card
- Filing . . . . 56.9 sec./card
TABLE 4. ESTIMATED NUMBER OF CARDS

<table>
<thead>
<tr>
<th>TYPE OF CARD</th>
<th>IN AUTHOR-TITLE CATALOG (BEFORE SEPARATION)</th>
<th>ADDED (PLUS SEPARATED)</th>
<th>IN AUTHOR &amp; TITLE CATALOGS (AFTER SEPARATION)</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>No.</td>
<td>Per Cent of Total</td>
<td>No.</td>
<td>No.</td>
</tr>
<tr>
<td>Title entries</td>
<td>174,199</td>
<td>38.1</td>
<td>31,643</td>
<td>205,842</td>
</tr>
<tr>
<td>Author entries</td>
<td>283,968</td>
<td>61.9</td>
<td>489,810</td>
<td>57.97</td>
</tr>
<tr>
<td>Total</td>
<td>458,167</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

The time needed to examine each card for added title entries varied considerably, while the Xeroxing time was determined by the speed of the machine itself. The sets of five cards each could easily be replaced without stopping the Xerox machine.

Over-all estimates. The relative accuracy of estimates is indicated by comparing the total number of titles in the library collection, as reported in the annual report for the year 1966/67 (205,737 titles), and the estimated total number of cards in the title catalog at the time of the completion of the project (205,842 cards). These figures exclude United States documents not classified in LC, since no title entries are made for them.

It is estimated that the subject catalog contains approximately 280,000 subject entries plus the average of 170 guide cards per drawer, one guide card for each subject entry used. (UWM library does not raise subject entries.) This figure, however, is approximate, since no attempt was made in this study to determine the ratio of guide cards to subject entries. The estimates of subject cards are not included in any of the tables in this paper.

Estimated cost of transfer in Table 5 is based on a flat wage of $1.50 per hour.

TABLE 5. ESTIMATED COST OF TRANSFER

<table>
<thead>
<tr>
<th></th>
<th>Hours</th>
<th>Cost</th>
</tr>
</thead>
<tbody>
<tr>
<td>Labor</td>
<td>986</td>
<td>$1,479.00</td>
</tr>
<tr>
<td>Xeroxing</td>
<td>28,122</td>
<td>$745.23</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>$2,224.23</td>
</tr>
</tbody>
</table>

In reality, the cost of labor was substantially reduced by employing a number of students at a lower hourly rate. Furthermore, the separation of the title catalog was performed at the time of transferring the whole public catalog (author-title and subject) to new cabinets. Hence, part of the cost of separating the title catalog, here reported, would be amortized by the over-all cost of transfer.

The cost of Xeroxing, based on a $0.0265 unit cost per card, includes material, equipment, and labor at $1.50 an hour. The number of cards reproduced (28,122) is 11.1 per cent smaller than the number indicated as added in Table 4 (31,643) because 3,521 of the “added” cards were from the serial catalog, kept separate till now.

Postscriptum. It is impossible at this time to evaluate accurately the accomplishment achieved at UWM by the separation of the author and title catalogs. Experience with the use of the title catalog since the split indicates that the labor and time involved were a well-invested expenditure. The separate title catalog provides an additional access to the files, by separating different usages; it cuts down the complexities of arrangement, and it speeds routine bibliographic verification of holdings; it makes filing simpler and finding faster. This much is already known. It is also known that the risk involved in attempting to improve library services is an unavoidable price of experimentation which, in turn, is inseparable from progress.
The paperbound revolution began several decades ago with the replacement of animal glues by synthetic glues. Publishers, who now issue perfect bound editions in great quantities, have created serious binding problems for librarians. Answers to some of these problems lie in the development of new materials, machines, and techniques for use in the workshop of the library. If the work could be done in the library, some troublesome delays would be eliminated. Considering the rapid scientific and technological developments, it should be only a matter of time until someone provides the answers needed.

The paperbound revolution of the past three decades has been received with varying degrees of enthusiasm by publishers, the public, and librarians. Publishers welcome the profits accompanying high volume sales. The low cost appeals to the public and librarians. Paperbounds are a mixed blessing, however, to librarians interested in durability as well as low cost, because they have encountered new problems created by certain characteristics of these books and magnified by the swiftly changing patterns of production in the publishing world.

There have always been books bound in paper or flexible covers, but the current boom began in England in 1935 with Penguin Books. When Pocket Books appeared in the United States in 1939 the boom was well on its way. For purposes of this paper, a paperbound book is any soft-cover monograph issued in more than fifty pages. This definition excludes periodicals. The Bowker Annual lists two broad types of paperbound books: "mass-market" and "other than mass-market."¹ There is no clear line between the two categories, but generally mass-market paperbounds are found on the racks in drugstores or newsstands and are cheaper than those usually sold by bookstores or published by scholarly organizations.

Library Use of Paperbounds

When paperbounds first appeared they were often issued as cheap reprints of popular hard-cover books, primarily fiction. This pattern has changed and they now encompass the whole spectrum of fiction and nonfiction. With the appearance of quality paperbounds the price range increased considerably, and such paperbounds currently may cost as much as $3.95. At first paperbounds were little used by librarians, but this has also changed. Many libraries now buy them in single or multiple copies. They buy them with good reason—they are cheaper than hardbounds. The Bowker Annual indicates that in 1965 an adult trade paperbound cost

TABLE 1

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>YEAR</th>
<th>VOLUMES SOLD</th>
<th>YEAR</th>
<th>VOLUMES SOLD</th>
<th>PER CENT CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Hardbound</td>
<td>1958</td>
<td>32,298,000</td>
<td>1963</td>
<td>40,213,000</td>
<td>24.2 increase</td>
</tr>
<tr>
<td>Paperbound</td>
<td>1958</td>
<td>5,661,000</td>
<td>1963</td>
<td>48,874,000</td>
<td>763.3 increase</td>
</tr>
</tbody>
</table>

only one-third as much as a hardbound.  

Librarians often buy paperbounds for other compelling reasons. Many books are available only in this form. Some are published as paperbounds before appearing in hard cover, and some never appear in hard cover. Many hard-cover books go out of print and appear again only as paperbound reprints. Foreign titles are often available only as paperbounds. Of particular concern to the academic librarian is the fact that many publications of societies, associations, institutes, and similar scholarly organizations are offered only in paper covers.

Libraries sometimes use paperbound books to satisfy heavy, transient demand for current popular books. They may acquire multiple copies of some titles. There is often no effort to catalog these books. They are frequently shelved by broad categories on drugstore-type display racks. Circulation methods vary but are often quite informal. When they wear out or are no longer in demand, the library may then acquire durable hard-cover editions of the same titles. Other libraries add paperbounds to their permanent collections. When this occurs the books must be cataloged and prepared for long-time use. To serve this purpose the books must be reasonably durable, but the cost of rebinding should be modest. The expense of rebinding has always been important to libraries and, in view of the changing patterns in the publishing world, it deserves the consideration of both librarians and the book trade at this time.

CHANGING PATTERNS

Broad acceptance of the paperbound book has brought significant changes in numbers of volumes sold and titles issued. The tables below consist of figures derived from the Book Trade Statistics sections of the 1960 through 1967 issues of the Bowker Annual.

Table 1 shows not only a rapid rate of growth in sales of paperbound books but also indicates that hardbounds have been overtaken in volumes sold. At the University of North Carolina library during the last seven months of 1966, 29.6 per cent of all books acquired were in paper covers. During the same period in 1967 the figure had risen to 46.7 per cent. Total acquisitions for 1967 meanwhile rose 38.4 per cent. An additional count of current acquisitions made during a two-week period in March 1968, showed that 23.7 per cent of all domestic acquisitions were paperbounds.

It is interesting to note that during the same period of time, the proportionate increase in sale of technical, scientific, and professional books was 73.9 per cent.

Statistics of foreign titles imported

TABLE 2

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>YEAR</th>
<th>VOLUMES SOLD</th>
<th>YEAR</th>
<th>VOLUMES SOLD</th>
<th>PER CENT CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>All types</td>
<td>1958</td>
<td>23,801,000</td>
<td>1963</td>
<td>41,391,000</td>
<td>73.9 increase</td>
</tr>
</tbody>
</table>

2 Ibid., p. 53.
show considerable fluctuation during the eight-year period represented in Table 3. From 1964 to 1966 the number of titles increased by more than a third. No figures are available for a comparison of foreign hard- and soft-cover imports. A tally of books received at the University of North Carolina library for a two-week period in March 1968, revealed that 49.8 per cent of foreign imports were paperbounds.

Perhaps the most striking change occurs in Table 4, where non-mass-market titles increased by 1967.7 per cent during a ten-year period while mass-market titles increased by only 80.07 per cent. A change in this trend may be indicated by the very modest increase in non-mass-market titles from 1965 to 1966.

HOW PAPERBOUND BOOKS ARE BOUND

Librarians today must manage ever increasing numbers of titles and a growing ratio of paperbound to hardbound books. This growth has brought serious new binding problems to librarians. The common paperbound is usually bound in large quantities by an edition binder. The method most frequently used is known as “perfect” binding. Such a binding does not require sewing, rounding, or backing. The pages are trimmed, the back is fanned and glued to the spine. Occasionally other methods of binding are used. In some paperbounds the pages are held together by wire staples and in others sewing and staples are used together. Common paperbacks usually appear with glued-on covers, cheap paper, narrow margins, and in non-standard size.

Publications of societies, associations, and other scholarly organizations differ frequently from the common paperbacks in form. They may have no covers, they may be issued in fascicles, or they may be larger than the common paperbacks. Often they are printed on a quality calendered paper; they may even appear in loose-leaf form. At times the only thing they have in common with conventional paperbacks is the lack of a hard cover.

Paperbound books may be rebound either at a commercial bindery or in the

TABLE 4

<table>
<thead>
<tr>
<th>CATEGORY</th>
<th>YEAR</th>
<th>TITLES</th>
<th>YEAR</th>
<th>TITLES</th>
<th>PER CENT CHANGE</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mass-market</td>
<td>1957</td>
<td>1,114</td>
<td>1966</td>
<td>2,006</td>
<td>80.07 increase</td>
</tr>
<tr>
<td>Other than mass-market</td>
<td>1957</td>
<td>355</td>
<td>1966</td>
<td>7,340</td>
<td>1967.7 increase</td>
</tr>
<tr>
<td>Mass-market</td>
<td>1965</td>
<td>2,349</td>
<td>1966</td>
<td>2,006</td>
<td>14.6 decrease</td>
</tr>
<tr>
<td>Other than mass-market</td>
<td>1965</td>
<td>6,968</td>
<td>1966</td>
<td>7,340</td>
<td>5.3 increase</td>
</tr>
</tbody>
</table>
library. The commercial binder can rebind in library binding or in cardboard covered with plastic or vinyl. Library binding is a type of binding designed to assure the strength and durability needed to withstand heavy library use. Unlike edition binding, where large quantities of a single title are bound by mass production techniques, library binding requires special attention to individual items varying in size and shape. In library binding the paper cover is ripped from the spine, the pages are sewn together, trimmed, rounded and backed, reinforced, and glued to a cloth- or buckram-covered case. The result is stronger and more durable than hardcover edition binding, but the cost is higher. Unfortunately, many paperbounds have such narrow margins they cannot be rebound in library binding.

Another type of commercial binding, commonly known as Permabind or Vina-bind, is similar to perfect binding. Sewing is eliminated but other features are added. The covers are removed, pasted on cardboard, and cased. The case is covered with a thin sheet of plastic or vinyl through which the original cover can be seen. The result is an attractive, relatively durable book. This type of binding costs less than library binding, but it brings other problems with it. Large or heavy volumes tend to fall apart. Quality paperbounds and scholarly publications are often printed on calendered paper which does not accept even the new synthetic glues well. Loose pages are a common result. Binders using this method provide a guarantee, but a book with loose pages must be returned to the bindery to be replaced or rebound by the binder, and this takes the book out of use.

Some rebinding of paperbounds is done in libraries by means of simple techniques and cheap materials. This type of rebinding usually involves removing the cover, sewing, stapling, or glueing. A case is usually made from adhesive coated cloth, cardboard, and cloth hinges and this is glued or stapled to the book. The result is neither attractive nor very durable, but the work can be done quickly and the cost is low.

**WHEN PAPERBOUND BOOKS ARE BOUND**

When a librarian buys a book in a hard-cover edition he can buy the book from the publisher or through a dealer. His decision is based on relative price and service offered by the publisher and dealer. When he buys a paperbound book for permanent addition to the collection he has an additional decision: he must decide when the book is to be rebound. The book can be rebound either before or after it reaches the library. Some dealers specialize in locating and rebinding paperbound books before shipping to the library. They usually take orders only for domestic mass-market or “quality” books. They will not normally take orders for non-trade paperbound books because there is little or no profit even when the order can be filled. Such material is difficult to locate, and the likelihood of failure is quite high. Book dealers make no money on books they fail to find.

Some dealers rebind paperbound books as part of blanket order arrangements with libraries. They obtain all titles issued by a particular publisher or published in a particular country, or in a certain language or subject area. They have all soft cover books rebound prior to delivery to the library. Dealers handling such blanket order arrangements do not have the problem of filling individual orders. They must, of course, screen the titles located, but this is not as difficult as trying to locate obscure sources of short-run paperbounds.

A curious new aspect of paperbounds has recently developed in England. Some English paperbounds now appear with the following notice on the back of the title page: “These books are sold subject to the condition that they shall
Paperbound Books: Many Problems, No Solutions / 441

not, by way of trade or otherwise, be lent, resold, hired out or otherwise circulated without the publisher's prior consent in any form of binding or cover other than that in which they are published and without a similar condition including this condition being imposed on the subsequent purchaser." This appears to be an effort by the publisher to increase the sale of the more expensive hard cover edition. A publisher can, of course, declare such a limitation in the use of his product, but ultimately the question must be decided in court. Publishers in the United States have not yet seen fit to follow the same path. Unfortunately many books first appear as paperbounds, and many of these may never be reprinted in hard cover form. When hard cover first editions go out of print, cheap paperbound reprints may be the only form available to librarians. Penguin Books is now producing a series of hard-cover Penguin Literary Editions for books which first appeared in soft covers. This is only a partial solution, and it is unlikely that many publishers will adopt it. It is certainly not an adequate solution for the problem of out-of-print material. The librarian is at the mercy of the publisher who, quite naturally, will publish another edition only when he feels a profit will be made.

Problems

Several problems face the librarian who adds paperbound books to his permanent collection. An article in the January 30, 1967, Publisher's Weekly discussed many aspects of paperbound publishing and stressed increased sales, number of titles, and consumer demand. It did not acknowledge the existence of a library demand for these books. In 1956 academic libraries spent $17,407,000 on books, but by 1965 the figure had risen to $76,836,398. This trend will probably be adversely affected by conflicting demands of the Vietnam war, but the annual increase was larger than federal aid even in the fiscal year ending June 30, 1966. During that year total federal aid to academic libraries for library materials was only $8,200,000, when the annual increase was $10,000,000. No figures are available to show what proportion of academic book expenditures is spent on paperbounds, but it should at least be a factor to be considered by publishers. Many first editions appear only as "quality" paperbounds, and librarians would welcome the simultaneous appearance of these titles in hard and soft cover. The librarian who intends to put a paperbound book into service is concerned with durability. The publisher must keep his costs as low as possible in order to make a profit. Most of his customers are not concerned with durability. In effect, the publisher has passed the cost of binding on to the librarian.

When a paperbound book leaves the library for rebinding it may be out of service for as much as a month. In many instances, for one reason or another, the delay is even longer. If the book is cataloged before binding, the catalog cards cannot be filed in the catalog until the book is returned, and a special procedure must be established to delay the filing of the cards. An alternative is to delay the cataloging until the book has been bound; this too, may cause problems. The library must be prepared to accept occasional errors in the form of the author and title on the spine of the book, and the task of adding the call number has been shifted to the library. All of these add to the cost and lead to frustrations, but the librarian has little choice if he is to add the book to his collection. It appears that the library must find an internal solution.

\footnote{Ibid., p. 6.}

\footnote{Ibid., p. 21.}
POSSIBLE SOLUTIONS

There is, unfortunately, no good solution to the problem of achieving durable binding at modest cost. Arthur Plotnik, in “The ‘Hardpaper’ Book,” discusses the emergence of a new product “about midway between the hardbound and paperbound trade book—intermediate in price, appearance and durability—perfectly suited for those intermediate library needs where a paperback is not durable enough and a hardcover too costly.” The hardpaper book, as described by Mr. Plotnik, is a considerable improvement over the paperback, and is cheaper than the hard-cover book. Unfortunately, it is not perfectly suited for library use. Most of the products he describes are either perfect bindings in mylar plastic covered boards, library bindings, or “bind-it-yourself-kits.” The latter appear to be a possible solution because the work can be done in the library, but these kits are not cheap and the result appears to be no more durable than the usual library product. These kits do not represent a major breakthrough.

Dealers may eventually accept orders for foreign and domestic scholarly paperbound books. At least one dealer has recently proposed to act as a central agency for paperbound titles of all publishers, commercial and nonprofit, foreign and domestic. Perhaps this is the beginning of a trend, and perhaps dealers may be induced to bind before delivery.


With three other books in this specialized field already, one might ask if a fourth would have any contribution to make. After all, it has not been long since an eminent professor of nuclear physics exclaimed to Mr. Wilson, “I didn’t know books were designed!” Since Adrian Wilson is himself something of a phenomenon, his book turns out to be, not a how-to-do-it manual, but an ode to the art of book design.

Two of the three earlier books, however, are devoted almost entirely to production, with scant attention to design. These are Sean Jennett’s The Making of Books (4th edition, Praeger, 1967), and Hugh Williamson’s Methods of Book Design (2nd edition, Oxford, 1966). The latter, despite its title, is more accurately described by its subtitle: “The Practice of an Industrial Craft.” Balancing the two British viewpoints are Marshall Lee’s Bookmaking: The Illustrated Guide to Design & Production (Bowker, 1965) and the book under review. Mr. Lee devotes about one-third of his book to design, and both of the American books are themselves examples of modern book design.

The salient difference between Mr. Wilson’s text and the others is that a reader only mildly interested in book design will find it difficult to lay the book down. Students in the graphic arts will likely be recruited to a field they may never before have considered.

Mr. Wilson’s book is written for designers and thus might seem to appeal to a more limited audience than the other three volumes. But those more interested in the technical aspects of book production might well gain the most from a reading of The Design of Books. In it are enumerated the steps a designer must take, from the receipt of the manuscript to the final detailed specifications he provides for the publisher and printer. The more one knows about book production, the more easily grasped are the designer’s special qualifications: a wide-ranging knowledge both of esthetics and of printing technology. Particularly useful is Mr. Wilson’s list of twenty-four questions which a designer needs to have answered before he decides to accept a design commission.

Four of the eleven chapters are given over to typography, printing methods, paper, and binding; the remainder deal with “The Art of the Layout,” “The Anatomy of the Book,” “Design Approaches,” “Trade Book Design,” and types of books, such as cookbooks, children’s books, legal tomes, limited editions, and dictionaries.

Scholars interested in the history of the book will be intrigued by Wilson’s discovery of the earliest book designs—layouts for the Nuremberg Chronicle, 1493. These layouts are reproduced for the first time, both in the text and as endpapers. Librarians will be startled by Mr. Wilson’s comment on permanent/durable book paper: “The ease of reproducing existing books by offset lithography has made the value of absolute permanency questionable, at least in terms of perpetuating culture if not bibliophily.”

The range and variety of the illustrations is noteworthy. Much more international than any of the other books, Wilson includes examples of the work of Berle, Facetti, Frutiger, Hlavsa, Massin, Passani, and Zapf, as well as of Dahlstrom, Eisenman, Ritchie, and Salter. Unfortunately, all illustrations have had to be drastically reduced in size, even though the book is a sizeable 8½ x 11 inches. While it makes the designer’s task more difficult, the measurements of the original page should be given whenever the reproduction is less than actual size. For example, the left half of the double-spread Kelmscott Chaucer title page, reproduced slightly smaller than a catalog card, gives very little idea of the impact of the original.

Every book designer will want The Design of Books for its inspiration and insight, its wealth of illustration, and lively design. Since any of the other three books contains much more detailed production information and technical aids, at least one of them will also be needed. My own choice of a mate would be Marshall Lee’s.
Bookmaking, but British colleagues especially might well opt for either Jennett or Williamson. Libraries, needless to say, will purchase all four whenever the budget will allow, but Mr. Wilson’s book is first among equals.—William R. Eshelman, Wilson Library Bulletin.


The primary purpose of this simply written handbook is to acquaint college and university presidents, deans, rectors, and other academic officials in the developing countries with the full meaning and value of their institutions’ libraries. Such a book has been much needed, because, second perhaps only to poor faculty attitude, lack of strong administrative support and understanding has probably been the major impediment in the way of improving library service in such institutions—often a more effective barrier even than the absence of adequate funds.

In his admirable effort to educate these laymen who are so important to academic libraries, Dr. Gelfand addresses himself lucidly and cogently to all of the major and many of the minor problems that have so long and so miserably plagued libraries in the developing countries. He points to the critical need for adequate status for librarians; he demonstrates the great benefits that can derive from centralized library administration; he presents the rationale for open stacks; he deplores the pernicious results of too great librarian accountability; he explains the need for intra- as well as inter-institutional library cooperation. These and many other similar little essays make the book almost an extended position paper on modern academic library management theory and practice—a kind of professional apologia pro vita sua.

Dr. Gelfand draws widely for illustrative examples, first upon his own extensive experience working with libraries in the “have-not” countries, second upon the literature and work of librarianship in the developing countries, third upon the experiences of the libraries of Europe, and finally and unobtrusively upon American librarianship. Appropriately for a Unesco Manual, the resulting amalgam reads like the professional travelogue of a bibliothecal cosmopolite, as the floor plans of the library of Ahmadu Bello University follow discussion of the cooperative acquisitions program of the Deutsche Forschungsgemeinschaft; as an explanation of the Library Board of Ghana and a description of the Regional Seminar on the Development of University Libraries in Latin America precede an account of fungicides developed by the Lenin State Library and a picture of a reading room in Douglass College library at Rutgers University. Perhaps in no other treatise has the world confraternity of academic librarianship been more dramatically displayed.

Although college and university administrators are the primary audience to whom Dr. Gelfand is speaking, there is much in the book that is of value to librarians as well. This is a good small textbook for courses in university library administration, discussing as it does both simply and well such diverse but important topics as university libraries in national development; the role of the university library; government and control of the university library; its organization and administration; staff and collection development; organizing the collections; reader’s services; auxiliary and supplementary services; cooperative activities; library buildings and equipment; financial administration; and evaluating library services.

Morris A. Gelfand’s University Libraries for Developing Countries is an important addition to the growing series of “Unesco Manuals for Librarians.”—D.K.


This doctoral dissertation, prepared for the school of library service at Columbia University with financial assistance from the Canada Council, is a valuable addition to the collection of surveys of Canadian libraries that have been published during
recent years. The facts were gathered during 1961 and the delay in publication is to be regretted, but fortunately it can be anticipated that the picture will be brought up to date by the comprehensive study of Canadian libraries soon to be made by Lowell Martin.

The provincial libraries, as defined by Dr. Beard, comprise the legislative library and the library extension agency of each of the ten provinces. The first third of his book is devoted to an account of their historical development; the remainder is a description and comparison of them as they were in 1961, with chapters on organization, personnel, resources, administrative services and functions, reader services, and the "present versus potential role of provincial libraries." Published information on the libraries was supplemented by an extensive questionnaire and by personal interviews. In addition, sixteen leading Canadian librarians representing institutions other than provincial libraries replied to a questionnaire that dealt with the place that provincial libraries ought to have in province-wide systems of library service.

The ten provinces are perhaps even more diverse than the fifty states, and their legislative libraries and extension services vary widely. It is clear that Canadian librarians are not prepared to advocate any single pattern of organizational and governmental framework for provincial libraries, but agreement is more general when functions, services, and resources are considered, and Dr. Beard's recommendations appear to be thoroughly sound. He advocates legislation to provide a sound legal base for those provincial libraries that do not now have one; emphasis on better use of personnel and in-service training; formulation of acquisition policies; agreements with other libraries for sharing of responsibility in building resources; closer cooperation with graduate library schools; a campaign for federal aid to libraries; definition of the population for whom direct reader services are to be provided; improved statistical records; and establishment of minimum standards. He observes also that further research is needed on the library extension services, which in some provinces are provided by agencies other than the regular library extension agency, and that further investigation is desirable of salaries, working conditions, personnel policies, and other factors affecting staff morale.

There are frequent references to the ALA Standards for Library Functions at the State Level, but individual provincial libraries have not been compared with state libraries. It would have been interesting to explore the likenesses and contrasts at least to some extent, but Dr. Beard has succeeded very well in doing the job that he set out to do: he was provided an excellent foundation for further study and planning.

—Edwin E. Williams, Harvard University.


A need exists for short courses designed specifically for industrial information workers who are new to the field. The short course appears to be a more practical training alternative than either in-service training or graduate study since it is both difficult to devise a thorough in-service training program and expensive for an organization to give employees leaves of absence for long periods of time.

Information Work Today is a compilation of ten lectures presented as a short course sponsored by the Liverpool school of librarianship. The course is for professional workers and, as such, is considerably more detailed and concentrated than a comparable course for clerical workers would be.

The lectures present a broad survey of industrial information service. The first two lectures, by D. Mason and D. Ball, are applicable to any special library. The administrative and physical organization, the services which can be offered, the necessity of knowing the research interests of the users and of having personal contact with the users are described by them in non-technical language.

The real value of this course is that it
presents many of the numerous sources of information outside the immediate library collections which are available to British industry, and which are often overlooked. Descriptions of these sources comprise the major part of the lectures. There is an excellent brief description of the British patent system by F. Newby. Other lectures describe the public technical library services, commercial information sources, the organization and problems associated with the technical report literature, and special library cooperation in Britain. The last lecture, by B. C. Vickery, is an interesting introduction to the problems of organizing an information file. These problems could well be the subject of the next short course, if one is planned.

Since the sources cited are primarily British, the usefulness of this book is somewhat limited for American industrial information workers. However, within the stated objectives of the course—that is, as an introduction to British industrial information work—it fills the need for information at this level.—Ted Srygley, University of Florida.


To many medical librarians the established pattern of medical education seems to be one which library education might profitably follow. The characteristics of this pattern are that the teaching is done by practitioners of the art, and an internship follows to consolidate the teaching. With such a model constantly before them, it is not surprising that the medical librarians at an invitational conference on education for health sciences librarianship held in Seattle in September 1967 should find themselves pulling in a different direction from the library educators. Predictably, the specialist librarians were concerned with cutting out the inessentials to get to the vital concern of specialized education, while the generalists inclined to the superimposing of specialized information onto a core common to all library training. Amicability seems to have prevailed, perhaps unfortunately. Participation was no doubt a salutary experience but the published report includes little that is new except turns of phrase, and will hardly serve, as its editor hoped, as “a framework which any graduate library school might use in developing a program for health sciences librarianship.”

Dr. Brodman trenchantly states the need for all librarians to develop their own interface with the machine. Dr. Kronick jovially implies that the whole thing may be premature because there is insufficient data about the nature of the work to be done in medical libraries. Dr. Bodemer correctly indicates that the history of medicine is one of several developing “social science” areas which will result in increasing demand on medical libraries from people outside the medical community, but he probably exaggerates the importance of medical history in the total picture. Dr. Pings hints at the great gap between theorizing and doing in library education when he says that the library school is presently the only institution that has the facility to sponsor and develop new hospital health science educational programs. (That will be the day.)

The present state of medical library educational programs is fairly well documented in the proceedings. The conclusions of the meeting, such as they were, are adequately summed up by Dr. Lieberman, and some gratuitous bulk is added by the inclusion of twenty-two pages of biographies of the participants.—G. S. T. Cavanaugh, Duke University.


This compilation is similar to the editor’s Development of Libraries in New India, which was published in 1965. It consists of twenty-eight articles on a variety of topics related to libraries and librarianship in India. Most of the articles are by Indian librarians and teachers of library science who are well known and highly regarded in India, with a few articles by non-librarians also included. Unfortunately, the editor has not organized the material in any
way. The articles appear in random sequence, and there is no index or guide to the subjects covered other than the table of contents at the beginning of the volume. Many of the titles of the articles do not give a clear indication of the subject matter in the articles, so one must leaf through the volume to discover what it contains.

As an indication of the variety of subjects covered, there are articles on university libraries, public libraries, teaching library science, library personnel, documentation, library buildings, library associations, bibliography, classification, maps, national libraries, art libraries, legal deposit, and the care of books. In spite of the poor arrangement of material, and its diversity, one can learn something about the development of libraries in India since independence by reading this book. Even more can be learned about present-day library problems in India and the needs for more rapid progress and stronger support. Many of the writers make concrete proposals for improvements which are badly needed. For example, N. N. Gidwani, D. C. Sharma, and Amitabha Chatterjee urge the establishment of a national library at New Delhi. Mr. Gidwani also recommends the creation of an “independent national documentation centre” and a “National Library for social sciences.” O. M. Korulla recommends that the Indian National Scientific Documentation Centre (INSDOC), which was founded in 1952, “should be established on a wider basis, with an all-subject coverage.” He also suggests that “regional documentation centres with specific subject-coverage and participation of libraries in its area may be useful.”

While some of the writers seem somewhat discouraged by the slow rate of progress, the majority show justifiable pride in what has been accomplished in Indian libraries since independence. As Bimal Kumar Datta writes in his article on “University Libraries in India”—“Thus, India is coming in line with the rest of the developed world and giving further evidence of the manner in which her genius can assimilate new and progressive elements and yet retain its continuity and identity.”—

John R. Russell, American College of Switzerland, Leysin.
Chafe, Wallace L
Seneca morphology and dictionary / by Wallace L. Chafe.
v. 126 p. 30 cm. (Smithsonian contributions to anthropology, v. 4)
Bibliography : p. 126.

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